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NO. 8

AIRLINES FLY ENTIRE YEAR WITHOUT ACCIDENT

Twelve-month Period Completed Without Fatal Accident or Serious Injury on Domestic Lines—2,000,000 Passengers Carried—President Roosevelt Congratulates Airlines and C. A. A.

On the morning of March 26, 1940, at a few minutes before 4 o'clock (E. S. T.), the domestic airlines of the United States completed an entire year of flying without fatal accident or serious injury to passenger, crew member, or other person. During this 12-month period the airlines, flying a total of more than 87 million miles, transported safely more than 2 million passengers for an aggregate of nearly 815 million passenger-miles, thus setting new all-time records for any national airline system.

The reaching of this safety milestone was dramatically signalized when, at 3:50 a. m. on March 26, the following message was dispatched from Washington over the 30,000 miles of teletypewriter circuit operated by the Civil Aeronautics Authority:

NOTAM: ¹ HEARTIEST CONGRATULATIONS TO ALL AIR LINE, CIVIL AERONAUTICS AUTHORITY, AND WEATHER BUREAU PERSONNEL UPON COMPLETION OF AN ENTIRE YEAR OF AIRLINE SAFETY. THIS IS ONE OF THE OUTSTANDING ACHIEVEMENTS IN THE HISTORY OF TRANSPORTATION.

(SIGNED)

ROBERT HINCKLEY,
Chairman CAA
CLINTON HESTER,
Administrator CAA
TOM HARDIN,
Chairman Air Safety Board

Within a few minutes this message had been transmitted by radio to some 208 air-line planes then in flight. Later, at breakfast, approximately 3,000 passengers traveling in those planes received copies of the message countersigned by the captain of their plane as souvenirs of the event.

President Roosevelt, in a letter to Chairman Hinckley, hailed the accomplishment of the safety record and requested that his congratulations be sent to every airline employee and all C. A. A. personnel. Copies of the President's letter were forwarded by air mail special delivery to the heads of all airline companies, to the president of the Air Line Pilots Association, and to the chiefs of the Authority's own regional offices, and arrangements were made to send reproductions of the letter to every air-line and C. A. A. employee. The President's letter was as follows:

"MY DEAR BOB:

"The news that our domestic airlines will on March 26 complete an entire year of flying without a single fatal accident is indeed gratifying. Will you please extend my heartiest congratulations to every last employee of the airlines—be he field boy, pilot, or president—and to your own personnel in the Civil Aeronautics Authority.

"I am deeply impressed by reports submitted to me showing that during the year now closing our domestic airlines have flown 87,325,145 revenue plane-miles; carried 2,030,000 passengers, flown 814,906,250 passenger miles, a truly remarkable aggregate. Looking behind this record, in which we can all take such pardonable pride, we find it has been achieved through cooperation and team work between the personnel of the air transport lines and workers in the Federal Government. I trust that this cooperation may continue with like satisfactory results through the years ahead.

FRANKLIN D. ROOSEVELT."

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¹ Notice to airmen.

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CIVIL AERONAUTICS AUTHORITY:

ROBERT H. HINCKLEY, *Chairman*
HARLEE BRANCH, *Vice Chairman*
OSWALD RYAN, *Member*
G. GRANT MASON, Jr., *Member*
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PAUL J. FRIZZELL, *Secretary*

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Col. Charles A. Lindbergh also wrote
in recognition of the airline safety
record. The text of his letter, which
was addressed to Chairman Hinckley,
follows:

"Thank you very much for send-
ing me the airline safety record for
the past year. I regard this as one
of the most significant advances
ever made in commercial aviation.

"A safety record approaching a
billion passenger-miles without fat-
ality indicates that the day is
not very far in the future when
most first-class travel will be by air.

"When one considers that the
original problems of speed and cost
of air transport have already been
largely overcome, and that the de-
velopment of instruments and radio
will soon make scheduled operations
possible under all but the most ex-
traordinary conditions of weather,
it seems clear that the airlines have
passed their period of infancy and
youth, and now demand their place
among the mature transport sys-
tems of the world. Much still
remains to be done in the extension
of routes and the development of
aircraft, but one may now look to-
ward the future with as much con-
fidence as we had hope 10 years ago.
It is no longer necessary to speak
of what air transport *may* accomplish.
Our hopes have become facts with
amazing rapidity and in many
instances the facts have already
outdistanced our vision. I know
of no one who would have dared to
dream, 10 years ago, of a safety
record in 1939 of over 800,000,000
miles without a fatality. Such a
record is truly a milestone in the
history of aviation."

Chairman Hinckley, en route to the
West coast, discussed the safety record

and read the President's comment on
it over a Nation-wide radio broadcast
from Salt Lake City, Utah, on the eve-
ning of March 26. The Chairman
pointed out that the record was espe-
cially significant because it was not
accomplished by shackling air transport
with unnecessary and useless regula-
tions.

"It was not accomplished at a sacri-
fice of the services offered by the air-
lines to the American public," he said.
"Quite the contrary. During the 12
months just ended our common carriers
of the air flew more than 87,000,000
miles. That is equivalent to flying 10
times around the world at the equator
every day of the year. It is roughly
equal to the total of airline flying logged
during the same period in all the rest of
the world put together. It is 16,000,000
more miles of flying than was ever done
in this country in any preceding year.

"The domestic airline system of the
United States is the only one in the
world that flies as much by night as by
day. This past year it flew almost as
many miles each 24 hours during the
winter as during the best weather of last
summer. In fact, it set its all-time
monthly record in December. Yet in
spite of this intense activity, not one
passenger, not one crew member, not
one bystander was so much as seriously
injured through the operation of this
transport system."

Paying the highest tribute to the
personnel of the Nation's airlines,
Chairman Hinckley added, "As Presi-
dent Roosevelt has indicated, this safety
record has been achieved through the
team work of many thousands of
individuals. It is particularly signifi-
cant because it required the complete
cooperation between an entire industry
and the governmental agency set up for
its assistance."

Clinton M. Hester, Administrator of
the Authority, expressed his apprecia-
tion of the cooperation the Authority
had received from the airlines and added
a word for the field force of the Author-
ity.

"I want to take this opportunity," he
said, "to send a special message of ap-
preciation to the hundreds of Civil
Aeronautics Authority employees who
man the Federal Airways System.
Twenty-four hours a day, in the blizzards
atop the Rockies, in the blazing heat of

the deserts or wherever these men have
been stationed, they have kept the
beacons lighted, they have kept the
radio ranges working accurately, they
have stood radio watches to transmit
weather reports and to answer the
questions of pilots in the air. From
traffic control centers at key points they
have watched, day and night, the move-
ment of every airline over 25,000 miles
of airways. Their share of the credit
for this achievement must be particu-
larly nameless. But there is not a man
amongst them who has not contributed
heavily toward it."

Tom Hardin, Chairman of the Air
Safety Board of the Civil Aeronautics
Authority, likewise joined in praise of
the airlines.

"During the winter of 1938 and the
early spring of 1939," he said, "there
were but three fatal accidents on the
domestic airlines. That in itself was an
all-time safety record, but the airlines
were not content to rest upon it. In
each case, experts of the Air Safety
Board were able accurately to determine
the causes of those three accidents.
The Board's findings and studies by the
Authority's Bureau of Safety Regula-
tion have resulted in changes in aircraft
design and revisions of operating pro-
cedures of nearly every airline in the
country. Most of these revisions were
made voluntarily by the manufacturers
and operators without the necessity of
new regulations being issued by the
Authority."

"The airlines were able to do this
because of the stabilization of their
business, brought about by the enact-
ment of the Civil Aeronautics Act of
1938. To substantiate that statement
one has only to compare conditions
before the enactment of the act when
competition, sometimes to a dangerous
extent, was forced upon the airlines.
Almost the first thing the Authority did
on assuming office was to assure the air-
lines that under the ample powers de-
legated to it as an independent body
responsible only to Congress, those who
refrained from dangerous competitive
practices would be protected. That was
all that was needed. This year's fine
record speaks of itself for the result."

Comparative statistics for the 12-
month periods ending March 26 of
1940, 1939, and 1938 are shown in the
following table.

Domestic Air Carrier Operations and Accident Statistics for the Yearly Periods
Mar. 27, 1937-Mar. 26, 1938; Mar. 27, 1938-Mar. 26, 1939; and Mar. 27,
1939-Mar. 26, 1940

	Period end- ing Mar. 26, 1938	Period end- ing Mar. 26, 1939	Period end- ing Mar. 26, 1940
Miles flown.....	67,002,154	71,080,308	87,325,145
Total passengers carried.....	1,187,738	1,389,818	2,028,817
Total passenger miles.....	693,484,761	868,220,938	814,900,250
Fatal accidents.....	4	5	0
Fatal passenger accidents.....	4	5	0
Passenger fatalities.....	32	20	0
Crew fatalities.....	10	8	0
Miles flown per fatal accident.....	16,750,539	14,216,062	
Miles flown per fatal passenger accident.....	16,750,539	14,216,062	
Passenger miles flown per passenger fatality.....	18,733,899	28,261,047	
Miles flown per crew fatality.....	6,700,215	8,885,039	

Air Safety Board Accident Analyses

Studies Reveal Spins and Stalls as Causing 50 Percent of Fatal Accidents

Accidents in which aircraft spun in or stalled and dived to the ground were responsible for a majority of the fatal accidents analyzed by the Air Safety Board and transmitted to the Civil Aeronautics Authority in February. During the month a total of 205 accidents were reported on, including two airline accidents of a minor nature. Of the 203 non-airline accidents, 23 involved fatalities, 12 of these resulting from spins or stalls.

Tom Hardin, Chairman of the Board, said that this ratio of spin and stall fatalities (approximately 50 percent) to the total of all fatal aircraft accidents is typical of accident statistics in civil flying for the past year and a half. He also pointed out that, although accidents resulting from spins or stalls are but a small percentage of all the accidents reported, the proportion of spin or stall accidents resulting in fatalities is inordinately high. The February reports slightly exaggerate these proportions, only 15 involving spins or stalls, though all but 3 of these were fatal.

"The Board believes that spin and stall accidents are of a preventable nature," Mr. Hardin said. "Nearly all of those analyzed by us have been caused by the pilot's lack of skill, combined with the vulnerability of the aircraft concerned to stalls and spins in the hands of unskilled airmen. In all too many cases, both of these factors have been aggravated by show-off or reckless flying at low altitude.

"We recognize the importance of good basic training and the use of well-qualified instructors as a means of eliminating this type of accident. Consequently, we have supported the Civil Aeronautics Authority in its efforts of the past year to promote higher standards of training.

"On the other hand, we realize that the skill of the average private pilot never can be expected to reach that of the professional pilot. Therefore, we consider the development of aircraft requiring less skill to operate of major importance to the increased safety of private flying. Today spinproof, 'stall-safe' aircraft can be built and their development and widespread use should save many lives each year."

Four of the twenty-three fatal accidents reported upon in February were the results of stalls during steep climbing turns at low altitude after which the plane spun to the ground before the pilot could regain control. In one of these cases fuel exhaustion contributed to the accident.

Acrobatics at low altitude was charged with six fatal accidents. In three instances the pilot stalled the plane and subsequently spun to the ground. In one of the accidents the aircraft struck a tree while the pilot was climbing to regain lost altitude; the other two were attributed to the failure of the pilot to effect complete recovery from intentional spins made at low altitude.

Another accident of the same general nature resulted from the pilot allowing his plane to stall while circling at low altitude over a friend's house.

There were three cases in which pilots failed to maintain flying speed during landing approaches and one in which the nose was held too high during a turn.

Continued flight into known adverse

weather conditions caused three fatal accidents and another was attributed to an inexperienced pilot continuing a flight after dark.

The four remaining fatal accidents included an instance in which the pilot for unknown reasons continued a spiral descent all the way into the ground; the disintegration of a plane in the air due to a test pilot imposing excessive loads on it in acrobatic maneuvers; a landing made on an automobile because a pilot attempted to stretch a glide back

(See ANALYSES page 168)

Status of Aircraft, Gliders, Pilots, and Glider Pilots by States as of Apr. 1, 1940

State	Aircraft			Glider	Pilots							Glider pilots
	Certificated	Uncertificated	Total		Airline transport	Commercial	Limited commercial	Private	Solo	Total		
Alabama.....	105	3	108	2	0	49	6	125	47	227	3	
Arizona.....	85	3	88	0	0	35	1	87	70	193	0	
Arkansas.....	85	5	90	0	0	44	4	56	18	122	0	
California.....	1,280	76	1,356	22	163	1,104	93	2,428	1,507	5,295	8	
Colorado.....	139	4	143	2	25	65	6	120	166	382	1	
Connecticut.....	152	3	155	1	1	76	14	189	146	426	2	
Delaware.....	66	0	66	0	0	22	4	47	13	86	0	
District of Columbia.....	159	1	160	1	5	94	4	161	55	319	2	
Florida.....	290	2	292	0	75	216	10	334	182	817	0	
Georgia.....	140	4	144	2	55	108	8	192	139	502	0	
Idaho.....	64	0	64	0	0	29	5	64	82	190	0	
Illinois.....	730	10	740	6	160	398	51	787	561	1,957	7	
Indiana.....	417	35	452	3	2	178	38	366	397	981	9	
Iowa.....	276	12	288	1	3	113	20	238	246	620	0	
Kansas.....	223	23	246	3	4	98	8	171	155	436	0	
Kentucky.....	90	6	96	0	1	43	6	82	87	219	0	
Louisiana.....	136	0	136	0	15	84	10	101	120	330	0	
Maine.....	94	3	97	0	1	46	13	79	59	198	0	
Maryland.....	155	8	163	2	15	104	11	206	92	428	1	
Massachusetts.....	315	2	317	6	22	197	34	353	415	1,121	3	
Michigan.....	540	22	562	16	24	258	48	647	479	1,356	27	
Minnesota.....	280	40	320	1	50	137	27	224	184	622	3	
Mississippi.....	113	5	118	0	0	35	2	72	34	143	0	
Missouri.....	340	15	355	1	85	199	8	226	330	848	4	
Montana.....	74	12	86	0	0	37	4	60	66	176	0	
Nebraska.....	144	10	154	0	0	64	12	100	137	313	0	
Nevada.....	29	1	30	0	1	13	1	28	29	72	0	
New Hampshire.....	48	1	49	0	0	24	8	56	54	142	1	
New Jersey.....	391	7	398	11	101	231	18	496	159	1,005	15	
New Mexico.....	50	2	52	0	1	12	2	26	41	82	0	
New York.....	1,050	14	1,064	11	83	638	71	1,237	794	2,821	30	
North Carolina.....	246	20	266	1	0	85	21	229	274	609	1	
North Dakota.....	67	14	81	0	0	29	2	43	31	108	0	
Ohio.....	677	30	707	6	12	337	68	685	391	1,493	8	
Oklahoma.....	249	7	256	0	2	127	15	184	118	446	0	
Oregon.....	144	26	170	1	19	65	9	133	156	382	0	
Pennsylvania.....	896	9	905	7	5	345	70	994	653	2,067	11	
Rhode Island.....	108	1	109	0	1	18	5	41	53	118	1	
South Carolina.....	107	1	108	0	1	42	8	92	95	238	0	
South Dakota.....	71	2	73	0	1	29	8	70	44	152	0	
Tennessee.....	156	4	160	1	20	80	14	278	34	426	0	
Texas.....	649	43	692	4	126	424	22	583	460	1,615	3	
Utah.....	47	2	49	0	30	26	3	51	39	152	0	
Vermont.....	44	2	46	0	0	21	5	38	23	87	5	
Virginia.....	180	2	182	1	16	126	15	278	106	541	2	
Washington.....	216	3	219	5	33	189	24	338	339	803	1	
West Virginia.....	119	5	124	0	1	48	22	128	130	329	0	
Wisconsin.....	259	23	282	1	2	110	25	191	152	480	1	
Wyoming.....	42	2	44	0	14	24	1	28	28	95	0	
Alaska.....	113	2	115	0	1	90	1	38	13	143	0	
Canada.....	1	0	1	0	3	4	1	14	8	30	0	
Canal Zone.....	1	0	1	0	2	19	0	9	0	30	0	
Hawaiian Islands.....	31	1	32	0	1	44	5	98	42	190	0	
Mexico.....	1	0	1	0	0	1	0	6	2	9	0	
Philippine Islands.....	0	0	0	0	0	11	0	6	2	19	0	
Foreign, miscellaneous.....	4	0	4	0	13	7	1	28	4	99	0	
Puerto Rico.....	17	0	17	0	1	7	0	10	3	21	0	
Total.....	12,505	528	13,033	122	1,196	7,073	895	13,960	10,064	33,188	149	
Percent.....					3.6	21.3	2.7	42.1	30.3	100.0		

1 Figures for these countries are for aircraft and pilots registered by the United States.

2 Civil aircraft in the Philippine Islands are now registered with the local Government.

3 Includes 10 certified and 52 uncertified glider.

4 Includes 1,096 women pilots divided as follows: 86 commercial, 50 limited commercial, 508 private, and 473 solo. The glider pilots include 2 women.

AIRWAYS AND AIRPORTS

W. P. A. "Report to Nation" Lists Extension of Airports and Airways

Total of 373 New Airports and Landing Fields Constructed in 4½ Years of Operation

A total of 197 new airports and 176 new landing fields have been built by W. P. A. workers in 4½ years of operations, according to a report issued last month by Col. F. C. Harrington, Commissioner of Work Projects, Federal Works Agency.

The report, which covered the construction and improvement of roads and streets (the largest single classification), and of airports, airways, and other transportation facilities, was the first of a series showing accomplishments on W. P. A. projects from July 1, 1935, when W. P. A. was established, through December 31, 1939. It is based on the most comprehensive inventory of W. P. A. work ever compiled, Colonel Harrington explained, to make available "a report to the Nation on the public improvements resulting from the employment of millions of America's jobless." When completed, the report will list all W. P. A. accomplishments, county by county.

Although the period covered by the report is 4½ years, Colonel Harrington pointed out, W. P. A. operations did not reach full development until near the end of 1935, when grants through the Federal Emergency Relief Administration were discontinued. The report does not include work done under the F. E.

R. A. or Civil Works Administration. It also excludes projects now operated by other Federal agencies but financed by W. P. A. funds.

In addition to the 373 new airports and landing fields constructed during the period the report lists projects for reconstructing or improving some 337 existing airports and building additions to 35 more, and improving 298 landing fields and making additions to 45 others.

Construction of new runways totaled 1,765,000 feet, or more than 332 miles, in length. More than 1,000,000 lineal feet of new runways were paved. Airport buildings constructed totaled 387, with 555 such buildings reconstructed or improved and additions built to 45 more.

Outstanding among other improvements to airways and airports were the construction of 9,588 airway markers and the installation of 7,873 light standards to illuminate field boundaries. A total of 64 landing areas were floodlighted, and 65 airway beacons were built.

A statistical summary of the airports and airways work accompanying the report appears at the bottom of this page. Details of W. P. A. operations by States may be obtained from State W. P. A. headquarters.

Report of Accomplishment on Airports and Airways Projects of the Work Projects Administration

[Cumulative through Dec. 31, 1939]

Item	Unit of measurement	Number or amount			
		New construction	Reconstruction or improvement	Addition	Surfacing
Airports.....	Number.....	197	337	35	—
Landing fields.....	do.....	176	298	45	—
Runways, total.....	Area in acres.....	22,556	41,945	2,201	—
	Length in thousands of feet.....	1,756	372	—	170
Paved runways.....	do.....	1,065	104	—	102
Unpaved runways.....	do.....	691	268	—	68
Airport buildings, total.....	Number.....	387	555	45	—
Administrative and terminal buildings.....	do.....	71	46	12	—
Hangars.....	do.....	155	143	16	—
Other airport buildings.....	do.....	161	366	17	—
Seaplane ramps and landing platforms.....	do.....	24	2	—	—
Landing areas floodlighted.....	do.....	64	16	—	—
	Number of light standards.....	1,633	180	—	—
Boundary lights.....	do.....	7,873	1,449	—	—
Airway markers.....	Number.....	9,588	1,539	—	—
Airway beacons.....	do.....	65	10	—	—

Note.—The above summary is a preliminary report subject to revision by W. P. A.

AIR TRANSPORTATION

See charts on facing page→

● Domestic air carrier traffic figures for February showed marked improvement over February of last year. The number of revenue passengers carried was nearly 75 percent greater, and revenue passenger-miles flown and express-pound miles flown were up 70 percent and 20 percent respectively.

● Although traffic registered a drop from the January 1940 totals, the revenue passenger load factor showed a slight improvement, being 51.36 percent as against 50.14 percent for January 1940 and 45.64 percent for February 1939.

Landing Facilities on April 1, 1940

Airports and Landing Fields	
Municipal airports.....	640
Commercial airports.....	467
Civil Aeronautics Authority intermediate fields.....	274
Army airdromes.....	58
Navy, Marine Corps, and Coast Guard stations.....	21
State-operated fields.....	45
Marked auxiliary fields.....	666
Private fields.....	104
Fields for miscellaneous Government activities.....	27
Total.....	2,302

Airports and landing fields having any night lighting equipment:

Municipal.....	296
Commercial.....	93
Intermediate.....	274
Army.....	34
Navy.....	12
State.....	8
Auxiliary.....	24
Private.....	7
Total.....	748

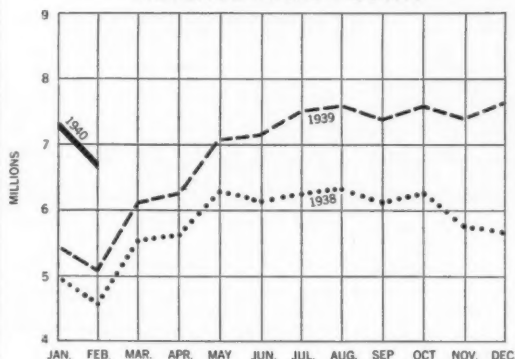
Seaplane Bases

Army, Navy, Coast Guard, Marine Corps.....		27
Other seaplane bases and anchorages.....		160
Total.....		187
Seaplane bases having any night lighting equipment:		
Navy and Coast Guard.....		2
Other bases and anchorages.....		8
Total.....		10

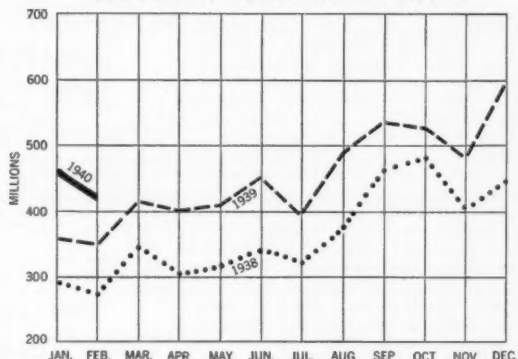
AIR TRANSPORTATION

Domestic Air Carrier Statistics for 1938, 1939, and First 2 Months of 1940

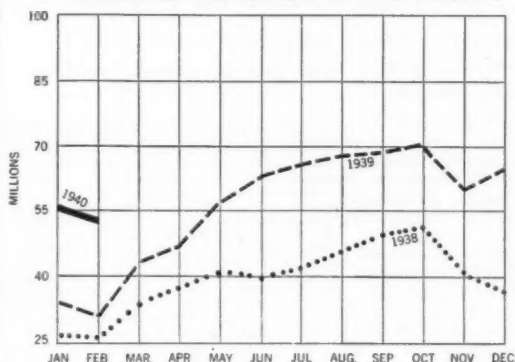
REVENUE MILES FLOWN



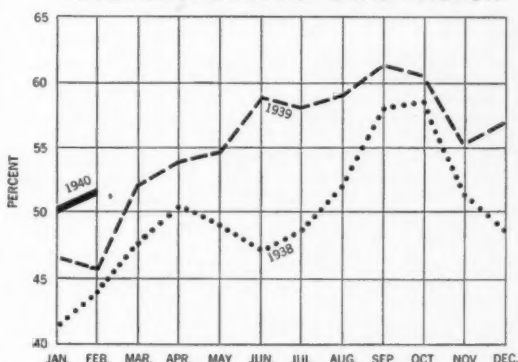
EXPRESS POUND-MILES FLOWN



REVENUE PASSENGER-MILES FLOWN



REVENUE PASSENGER LOAD FACTOR



Domestic Air Carrier Operations Statistics for February 1940

Operator	Revenue miles flown		Revenue passenger-carried		Revenue passenger-miles flown		Express pound-miles flown		Revenue passenger load factor (percent)	
	February 1940	Percent change over 1939	February 1940	Percent change over 1939	February 1940	Percent change over 1939	February 1940	Percent change over 1939	February 1940	February 1939
American Airlines, Inc.	1,536,790	40.84	38,737	85.51	15,118,819	70.76	121,056,302	24.38	60.59	49.00
Boston-Maine Airways, Inc.	55,390	27.21	1,285	78.97	203,300	95.28	227,488	43.76	36.71	23.91
Braniff Airways, Inc.	273,433	22.07	5,787	70.06	1,888,489	79.05	9,998,424	14.16	49.60	49.21
Chicago & Southern Airlines, Inc.	117,770	21.73	1,541	51.08	588,461	38.57	3,030,972	-21.26	64.14	43.89
Continental Air Lines, Inc.	86,389	75.26	774	233.62	239,474	221.27	355,755	194.05	36.27	25.20
Delta Air Corporation	133,286	34.12	2,656	92.74	889,386	68.80	1,830,448	59.07	51.51	41.10
Eastern Air Lines, Inc.	1,164,471	55.68	23,986	85.21	13,517,472	63.73	73,201,959	45.65	61.92	62.80
Inland Air Lines, Inc.	68,116	-1.26	515	68.30	132,634	70.30	179,960	-158.33	19.47	10.72
Marquette Air Lines, Inc.	6,142	-164.18	34	-167.65	7,875	-176.67	0	-	21.37	16.78
Mid-Continent Airlines, Inc.	88,872	20.20	1,043	32.87	256,914	47.95	635,332	11.94	28.91	26.70
National Airlines, Inc.	67,618	26.84	1,896	126.52	426,921	120.81	338,475	93.25	63.14	38.84
Northwest Airlines, Inc.	416,468	30.90	5,834	159.98	2,221,657	164.91	14,863,404	48.18	27.42	26.36
Pennsylvania-Central Airlines Corporation	219,522	4.28	7,788	37.48	1,371,629	41.63	5,808,249	16.69	40.37	47.30
Transcontinental & Western Air, Inc.	895,270	38.20	13,088	86.84	6,196,662	74.67	47,373,374	23.30	42.27	33.24
United Airlines Transport Corporation	1,376,830	23.35	19,028	66.87	9,398,500	66.98	131,839,085	7.81	50.17	46.64
Western Air Express Corporation	162,647	-4.36	2,229	92.16	756,840	79.58	11,241,247	7.46	37.98	20.41
Wilmington-Catalina Airlines, Ltd.	3,900	-7.69	619	-8.40	18,570	-8.40	213,750	-10.92	46.06	47.93
Total	6,672,914	32.62	126,840	74.96	53,033,612	70.72	422,394,284	20.95	51.36	45.64

PRIVATE FLYING

Training Record Forms Available

A supply of the record and report forms especially developed for the Civilian Pilot Training Program has been printed and stocked for sale by the United States Government Printing Office. These forms, which were supplied to the operators participating in the program for reporting to the Authority on their month's training activities proved so useful as a convenient means of keeping training records that many operators throughout the country wrote to the Authority requesting that the forms also be made available for maintaining records in connection with non-program training activities. In compliance with these requests arrangements were made with the Printing Office to stock certain of these forms for sale.

The forms are of two general types, one for maintaining aircraft records and the other for keeping individual student records.

There are three aircraft record forms: *Daily Flight Inspection Record* (Form 526); *Aircraft Maintenance Record* (Form 529); and *Operator's Monthly Cost Summary* (Form 530). The *Daily Flight Inspection Record* is intended to assist the operator in maintaining an efficient system of operating records on each of his airplanes. The *Aircraft Maintenance Record*, which is a companion form to the *Daily Flight Inspection Record*, is intended to assist the operator in keeping an efficient record of the servicing and maintenance of each of his airplanes. The monthly cumulative totals for each airplane from these inspection and maintenance forms are transcribed at the end of the month to the *Monthly Cost Summary* form, thus furnishing the operator with an accounting of all costs in connection with the operation of his aircraft, particularly as applied to training activities.

The five student record forms (one covering ground school and the others actual flying instruction) enable the operator to maintain a complete and accurate history of the progress of each student throughout his training period. Like the *STUDENT PILOT LOG BOOK*, which was placed on sale several months ago, all five forms are designed for use in conjunction with the widely acclaimed Controlled Private Flying Course which has been used so successfully in the Authority's current training program. These forms are as follows: *Ground School Record* (Form 528); *Flight Record, Stage A, Dual Instruction* (Form 527A); *Flight Record, Stage B, Primary Solo* (Form 527B); *Flight Record, Stage C, Advanced Solo* (Forms 527C-1 and 527C-2). The forms have been printed on convenient pads of 100 sheets.

The textbooks and forms now available for use outside the Civilian Pilot Training Program are as follows:

Ground Texts and Forms

STUDY OUTLINE FOR PRIMARY GROUND INSTRUCTION, Civil Aeronautics Bulletin No. 20. 10 cents per copy.
PRIMARY GROUND STUDY MANUAL, Civil Aeronautics Bulletin No. 21. 15 cents per copy.
DIGEST OF THE CIVIL AIR REGULATIONS FOR STUDENT AND PRIVATE PILOTS, Civil Aeronautics Bulletin No. 22. 10 cents per copy.
PRACTICAL AIR NAVIGATION,* Special Publication No. 197. 65 cents per copy.
GROUND SCHOOL RECORD, Form 528. 25 cents per pad.

* Published by the U. S. Coast and Geodetic Survey.

Flight Texts and Forms

FLIGHT INSTRUCTOR'S MANUAL, Civil Aeronautics Bulletin No. 5. 25 cents per copy.
STUDENT PILOT LOG BOOK. 15 cents per copy.
DAILY FLIGHT INSPECTION RECORD, Form 526. 25 cents per pad.
FLIGHT RECORD—STAGE A, Form 527A. 25 cents per pad.
FLIGHT RECORD—STAGE B, Form 527B. 25 cents per pad.
FLIGHT RECORD—STAGE C1, Form 527C-1. 25 cents per pad.
FLIGHT RECORD—STAGE C2, Form 527C-2. 25 cents per pad.
AIRCRAFT MAINTENANCE RECORD, Form 529. 25 cents per pad.
OPERATOR'S MONTHLY COST SUMMARY, Form 530. 25 cents per pad.

The texts and forms are obtainable from the Superintendent of Documents, United States Government Printing Office, Washington, D. C., and not from the Civil Aeronautics Authority. The rules of the Superintendent of Documents require that remittances be made in advance of shipment of publications, either by coupons, sold in sets of 20 for \$1 and good until used, or by check or money order payable to the Superintendent of Documents. Currency may be sent at senders' risk. Postage stamps, foreign money, or smooth coins are not acceptable. A discount of 25 percent is allowable to book dealers and quantity purchasers of 100 or more publications.

CERTIFICATES

Summary¹

Pilot certificates of competency active.....	33,188
Air-line transport pilot certificates of competency active.....	1,196
Student pilot certificates active.....	32,819
Glider pilot certificates of competency active.....	149
Student glider pilot certificates active.....	299
Mechanic certificates of competency active.....	10,170
Parachute rigger certificates of competency active.....	430
Certificated aircraft active.....	12,505
Uncertificated aircraft active.....	528
Certificated gliders active.....	40
Uncertificated gliders active.....	82
Repair stations holding certificates of competency active.....	193
Ground instructors certificates of competency active.....	616
Air-traffic control-tower operators certificates of competency active.....	224
Air carrier dispatchers certificates of competency active.....	317

¹ As of Apr. 1, 1940.

New Type Certificates

(Certificate numbers and dates of assignment in parentheses)

AIRCRAFT

Engineering & Research, 415 and 415C, two-place closed land monoplane. Engine, Erco 11-116 (model 415) or Continental A-65-1 (model 415C) (718, March 25, 1940).
 Piper, J4F, two-place closed land monoplane. Engine, Lycoming 0-145-B1 (721, March 22, 1940).
 Cessna, T-50, five-place closed land monoplane. Engines, 2 Jacobs L-4MB (722, March 25, 1940).
 Lockheed, 18-07, 17-place closed land monoplane. Engines, 2 Pratt & Whitney Hornets S1E3-G.

ENGINES

Wright, Cyclone GR-1820-202A, 9-cylinder radial air cooled—3:2 reduction gears, 1,000 horsepower at 2,300 revolutions per minute at 6,900-foot pressure altitude (219, March 21, 1940).

PROPELLERS

Curtiss, C5328 propeller with 714C2-18 blades, steel, controllable pitch, 11-foot 6-inch diameter, 1,050 horsepower, 1,435 revolutions per minute (735, March 26, 1940).

Repair Stations Issued Certificates of Competency

American Airlines, Inc., Union Air Terminal, Burbank, Calif., approved March 27, 1940, for repair of welded steel tube structure, excluding fittings; aluminum alloy structure, excluding fittings; and assembly.
 Ashburn Flying Service, Inc., R. F. D. No. 1, Alexandria, Va., approved March 18, 1940, for repair of welded steel tube structure, excluding fittings.
 Engel Aircraft Specialties, Escondido, Calif., approved March 27, 1940, for repair of steel fittings; aluminum alloy structure; aluminum alloy fittings.
 Southern Airways Sales Co., Inc., Municipal Airport, Birmingham, Ala., approved March 18, 1940, for repair of welded steel tube structure; wood structure, excluding box and laminated spars, wood-covered fuselages, wings, and control surfaces; fabric covering; steel fittings; assembly; and engines.
 Roscoe Turner Aeronautical Corporation, Municipal Airport, Indianapolis, Ind., approved March 27, 1940, for repair of welded steel tube structure; wood structure; fabric covering; wood-covered fuselages, wings and control surfaces, and box and laminated spars; steel fittings; and assembly.
 Valley Airways, Inc., Winchester, Va., approved March 18, 1940, for repair of wood structure, excluding box and laminated spars, wood-covered fuselages, wings and control surfaces; and fabric covering.

Changes in List of Repair Stations Issued Certificates of Competency

Change address of Becker Aircraft Sales Co., from Dravosburg to Homestead, Pa., and add for repair of wood-covered fuselages, wings and control surfaces, and box and laminated spars; aluminum alloy structure; aluminum alloy fittings; wood-covered fuselages, wings and control surfaces, and box and laminated spars; steel fittings; and engines.
 California Polytechnic School, San Luis Obispo, Calif., add for repair of aluminum alloy structure; aluminum alloy fittings; and engines.
 Pan American Airways System—Panafr do Brasil, Rio de Janeiro, Brasil, delete "for repair of engines."
 Southern Air Services, Inc., Memphis, Tenn., delete "for repair of wood covered wings, fuselages, and control surfaces, and box and laminated spars."
 Delete "Bacon Aircraft Repair Depot, Vancouver, Wash."
 Delete "Beacon Field, Inc., Alexandria, Va.," name changed to Ashburn Flying Service, Inc.
 Delete "Northwest Instrument Service, Portland Airport, Portland, Oreg."
 Delete "Pan American Airways System, Panafr do Brasil, S/A, Belem, Para, Brasil."

CIVIL AERONAUTICS AUTHORITY

OFFICIAL



ACTIONS

OPINIONS, ORDERS AND REGULATIONS

FOR THE PERIOD MARCH 16-31, 1940, INCLUSIVE

C.A.A. OPINIONS

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DOCKET No. 5-401 (B)-1*

NATIONAL AIRLINES, INC., *ET AL.*—CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

(Daytona Beach-Jacksonville operation)

In the matter of the applications of National Airlines, Inc., and Eastern Air Lines, Inc., for certificates of public convenience and necessity under section 401 of the Civil Aeronautics Act of 1938.

Decided March 21, 1940

Application of National Airlines, Inc., for amendment of its certificate of public convenience and necessity authorizing the air transportation of mail, persons, and property on route No. 31 so as to authorize similar air transportation between Daytona Beach and Jacksonville, Fla., granted.

In all other respects, the applications of National Airlines, Inc., denied.

Applications of Eastern Air Lines, Inc., denied.

APPEARANCES:

William I. Denning and *John W. Cross* for National Airlines, Inc.
E. Smythe Gambrell, *Gerald B. Brophy*, and *George A. Spater* for Eastern Air Lines, Inc.

George C. Neal and *Hubert A. Schneider* for Civil Aeronautics Authority.

OPINION

BY THE AUTHORITY:

National Airlines, Inc., hereinafter referred to as "National," by application filed September 6, 1938, as amended October 18, 1938, and

APRIL 15, 1940

NOTE ON THE ARRANGEMENT OF THESE PAGES

This part of the JOURNAL in each issue presents a current record of the official actions taken by the Civil Aeronautics Authority. Digests of all orders and regulations are carried in outer columns under the title "Abstracts." Persons having specific interest in any of these orders may obtain complete verbatim copies by writing to the Director of Statistics and Information, Civil Aeronautics Authority, Washington, D. C.

The large inner columns, set in different type, carry verbatim all opinions accompanying Authority actions. The type and format used will be utilized in the preparation of bound volumes of opinions of the Authority which will be issued at appropriate intervals. After the first volume is completed, the temporary page numbers now used will be replaced by the actual volume and page number which the text will carry in the bound volumes.

ABSTRACTS

ORDERS

Order No. 437: Offer accepted in compromise of civil penalties for violations.

The Authority on March 22 accepted the following offer in compromise of civil penalties incurred for violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

Raymond C. McClain, Indianapolis, Ind.—For piloting an aircraft acrobat-

ABSTRACTS

(Continued)

ically over an airport at an altitude of less than 1,500 feet without being equipped with a parachute—\$50.

Order No. 438: Private pilot certificate of James M. Wickham suspended for 60 days.

The Authority on March 19 suspended for a period of 60 days, private pilot certificate No. 39146, held by James M. Wickham, Wichita, Kans., for piloting an aircraft with a person aboard who occupied a control seat of said aircraft without the dual controls thereof having been made inoperative although said person was not possessed of a pilot certificate valid for the operation involved, and other violations of the Civil Air Regulations.

Order No. 439: Violation referred to the Attorney General for judicial action.

The Authority on March 19 referred the following case to the Attorney General for judicial action under the Civil Aeronautics Act of 1938:

Carl L. Washburn, Graham, Tex.—For piloting an aircraft on a civil airway without being possessed of a pilot certificate, in violation of the Civil Air Regulations.

Order No. 440: Eastern Air Lines to intervene in Houston-Corpus Christi application.

The Authority on March 19 granted Eastern Air Lines, Inc., permission to intervene in the application of Braniff Airways, Inc., for an amendment to its certificate of public convenience and necessity authorizing transportation of mail between Houston, Tex., and Corpus Christi, Tex.

Order No. 441: Amended certificate of National Airlines and denied Eastern applications.

The Authority on March 21 granted application of National Airlines, Inc., to amend its certificate of public convenience and necessity for route No. 31 so as to authorize air transportation with respect to persons, property, and mail between Daytona Beach and Jacksonville, Fla., but otherwise denied applications filed by National Airlines, Inc., and Eastern Air Lines, Inc. (For full text of opinion and order, see docket Nos. 5-401 (B)-1 and 22, and Docket Nos. 9-401 (B)-1 and 203, p. 163).

by amended application filed January 10, 1939, as further amended at the hearing subsequently held (Docket No. 5-401 (B)-1) seeks a certificate of public convenience and necessity under section 401 (d) (1) of the Civil Aeronautics Act of 1938. Authorization is thereby sought to engage in the air transportation of mail, persons, and property (1) between Daytona Beach and Jacksonville, or (2) between Lakeland and Jacksonville via Ocala and Gainesville, or (3) over both such proposed routes, which lie entirely within the State of Florida. It is also requested, in the alternative, that authority to operate over

*This report also embraces Docket No. 222, application of National Airlines, Inc.; Docket Nos. 9-401 (B)-1 and 203, applications of Eastern Air Lines, Inc. These applications were consolidated for the purpose of hearing.

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both such proposed routes be granted by amending National's certificate of public convenience and necessity which authorizes the air transportation of mail, persons, and property over route No. 31. By application filed April 14, 1939, under section 401 (h) of the act (docket No. 222), it is again requested that the certificate for route No. 31 be amended so as to extend the route from Daytona Beach into Jacksonville.

Route No. 31, entirely within the State of Florida, extends between the terminal points Daytona Beach and Miami, via the intermediate points Orlando, Lakeland, Tampa, St. Petersburg, Sarasota, and Fort Myers. National also holds a certificate of public convenience and necessity authorizing the air transportation of mail, persons, and property over route No. 39 which extends between the terminal points Jacksonville, Fla., and New Orleans, La., via the intermediate points Tallahassee, Marianna, and Pensacola, Fla., Mobile, Ala., and Gulfport, Miss. The certificates for these routes were issued by the Authority on March 14, 1939.¹

Eastern Air Lines, Inc., hereinafter referred to as "Eastern," by applications filed September 28, 1938, as amended October 17, 1938 (Docket No. 9-401 (B)-1), and March 13, 1939 (Docket No. 203), seeks certificates of public convenience and necessity, under section 401 (d) (1) of the act, authorizing it to engage in the air transportation of mail, persons, and property within the State of Florida between (1) Jacksonville and Miami via Tampa, and (2) Tallahassee and Orlando via Ocala, respectively.

Eastern holds certificates of public convenience and necessity authorizing it to engage in air transportation with respect to mail, persons, and property on routes Nos. 5, 6, 10, 20, 40, and 42, issued by the Authority on June 9, 1939.² A description of these routes with such intermediate points as are material to the consideration of the applications herein follows: Route No. 5 extends between the terminal points Newark, N. J., and New Orleans, La., via the intermediate points Washington, D. C., Richmond, Va., Atlanta, Ga., and Montgomery, Ala.; route No. 6, between the terminal points Newark, N. J., and Miami, Fla., via the intermediate points Philadelphia, Pa., Baltimore, Md., Washington, D. C., Richmond, Va., Raleigh, N. C., Charleston, S. C., Savannah, Ga., Jacksonville, Daytona Beach, Orlando, Vero Beach, and West Palm Beach, Fla.; route No. 10,

between the terminal points Chicago, Ill., and Jacksonville, Fla., via the intermediate points Indianapolis, Ind., Louisville, Ky., Nashville and Chattanooga, Tenn., and Atlanta and Macon, Ga.; route No. 20,

¹ National Airlines, Inc., certificates of public convenience and necessity, docket Nos. 5-401-E-1 and 5-401-E-2.

² Eastern Air Lines, Inc., certificates of public convenience and necessity, docket No. 9-401-E-1.

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between the terminal points New Orleans, La., and Houston, Tex.; route No. 40, between the terminal points Tampa, Fla., and Tallahassee, Fla., the terminal points Tallahassee, Fla., and Atlanta, Ga., via the intermediate point Albany, Ga., and the terminal points Tallahassee Fla., and Memphis, Tenn., via the intermediate points Dothan, Montgomery, Birmingham, and Florence-Sheffield-Tusculumbia, Ala.; and route No. 42, between the terminal points Houston, Tex., and San Antonio, Tex., and the terminal points Houston, Tex., and Brownsville, Tex.

The following map shows those routes of the applicants which serve points in Florida; the proposed operations; such points, lying without the State of Florida and served by either of the applicants, as are material herein; and the populations of the Florida points affected as shown by the 1930 census:



ABSTRACTS

(Continued)

Order No. 442: American Airlines to intervene in Los Angeles-Mexico City application.

The Authority on March 19 granted American Airlines, Inc., permission to intervene in the application of Pan American Airways, Inc., for a certificate of public convenience and necessity authorizing the transportation of passengers, property, and mail between Los Angeles, Calif., and Mexico City, Mexico, but denied request of American Airlines for a postponement of said proceeding.

Order No. 443: Authorized issuance of commission to three United States consular officers to take depositions in Marquette case.

The Authority on March 20 authorized the issuance of a commission to three United States consular officers at Montreal, Canada, to take depositions in connection with the reopened hearing on the application of Marquette Airlines, Inc., for a certificate of public convenience and necessity.

Order No. 444: Marquette denied motion to vacate order reopening hearing.

The Authority on March 19 denied motion of Marquette Airlines, Inc., to vacate the order of the Authority reopening the hearing on the application of Marquette for a certificate of public convenience and necessity (order No. 398).

Order No. 445: Violation referred to the Attorney General for judicial action.

The Authority on March 22 referred the following case to the Attorney General for judicial action under the Civil Aeronautics Act of 1938:

Aerovias Nacionales, Inc., San Juan, Puerto Rico.—For operating an aircraft on numerous occasions in scheduled air carrier operation transporting mail, passengers, and freight within Puerto Rico, and between Puerto Rico and adjacent island possessions of the United States, when at no time during this period was there in effect an airworthiness certificate for said aircraft.

Order No. 446: Mid-Continent application for Kansas City-Denver certificate dismissed.

The Authority on March 22 dismissed application of Mid-Continent Airlines,

ABSTRACTS (Continued)

Inc., for a certificate of public convenience and necessity authorizing air transportation between Kansas City, Mo., and Denver, Colo.

Order No. 447: This number assigned to order not yet released.

Order No. 448: Student pilot certificate of Theodore Boschma revoked.

The Authority on March 26 revoked student pilot certificate No. 91806, held by Theodore Boschma, Coldwater, Mich., for making a solo flight on a civil airway although at such time his instructor had not certified that he was competent to make such flight.

Order No. 449: Offers accepted in compromise of civil penalties for violations.

The Authority on March 26 accepted the following offers in compromise of civil penalties incurred for certain violations of the Civil Aeronautics Act and the Civil Air Regulations:

Ellsworth Brandenburg, Compton, Calif.—For piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction, although said aircraft was of a weight and engine classification other than as specified in his private pilot certificate—\$25; and

Lyle R. Hincks, Flint, Mich.—For piloting an aircraft on a civil airway in weather conditions below those prescribed for contact flight within control zones without being possessed of an instrument rating and said aircraft not equipped for instrument flight—\$25.

Order No. 450: Bickell authorized to fly aircraft bearing Canadian identification over United States.

The Authority on March 26 granted application of J. P. Bickell for blanket permission to fly a Grumman aircraft bearing Canadian registration identification marks over the territory of the United States, subject to certain terms and conditions.

Order No. 451: Interlocking relationships of C. Coburn Darling.

The Authority on March 28 approved interlocking relationships of C. Coburn Darling, Canadian Colonial Airways, Inc., and Roosevelt Field, Inc., but denied application for interlocking relationships of C. Coburn Darling, Canadian Colonial Airways, Inc., and the Aviation Corporation. (For full text of opinion and order see docket No. 234, p. 189).

By order of the Authority dated May 10, 1939, the several applications of the two applicants were consolidated into one proceeding. After due notice to the public and interested parties, a public hearing was held before Examiners C. E. Leasure and R. J. Bartoo on May 31, June 1, 2, 6, 7, 8, 9, and 10, 1939, and a brief was subsequently filed by each applicant.

On December 7, 1939, the examiners duly filed and served their report recommending that the Authority find: (1) that the public convenience and necessity require the extension of route No. 31 from Orlando to Jacksonville; (2) that air transportation between other points named in the applications in this proceeding is not required by the public convenience and necessity; and (3) that National is fit, willing, and able properly to perform the transportation proposed in finding No. 1. It was further recommended that the certificate of public convenience and necessity covering route No. 31 issued to National on March 14, 1939, be amended to provide for the service described in finding No. 1.

Thereafter, each applicant filed an additional brief, and Eastern, on December 18, 1939, duly filed its exceptions to the examiners' report. These exceptions, 37 in number, in general attack both the recommendation that National's application should be granted, and that the applications of Eastern should be denied. Oral argument was held before the Authority on January 24, 1940.

The applications herein are governed by sections 401 (d) (1) and 401 (h) of the act. Section 401 (d) (1) provides: "The Authority shall issue a certificate authorizing the whole or any part of the transportation covered by the application, if it finds that the applicant is fit, willing, and able to perform such transportation properly, * * * and that such transportation is required by the public convenience and necessity; * * *." Section 401 (h), among other things, provides: "The Authority, upon petition or complaint or upon its own initiative, after notice and hearing, may alter, amend, modify, or suspend any such certificate, in whole or in part, if the public convenience and necessity so require, * * *."

It is, of course, impossible to define with any degree of particularity the phrase "public convenience and necessity," under which test the applications herein must be decided. As stated in our first new route proceeding,³ the meaning of the phrase must be largely ascertained by reference to the context and objectives of the particular statute in which it is used. Section 2 of the Civil Aeronautics Act, setting forth the declaration of policy, directs the Authority in the exercise and performance of its powers and duties, to consider certain

³Northwest Airlines, Inc., Duluth-Twin Cities operation, docket Nos. 131 and 232.

factors,⁴ among others, as being in the public interest and in accordance with the public convenience and necessity.

Of all the enumerated factors, the first states in most comprehensive language the objectives of the act, with respect to air transportation. It is the "encouragement and development of an air-transportation system properly adapted to the present and future needs of the

foreign and domestic commerce of the United States, of the Postal Service, and of the national defense.”⁴ Others of the enumerated factors, as, for example, the fostering of sound economic conditions in air transportation, and competition to the extent necessary to assure the sound development of an air-transportation system, serve to complement and point the way toward the achievement of the broad-objective as quoted above.

In order to encourage and develop an air-transportation system adapted to the needs of commerce, the Postal Service, and the national defense, additional facilities for air transportation must, upon proper showing in an appropriate proceeding, be granted to those areas or communities which are inadequately served. On the other hand, it is equally necessary, in attaining the broad objectives of the act, to insure against the inauguration of air transportation service in excess of the reasonably foreseeable requirements of the area affected in order that an uneconomical burden will not be placed upon the development of air transportation and upon the Government. Thus, in a proceeding with respect to a “new route” application, it would be pertinent to consider the degree of self-sufficiency of a proposed route, not only for the purpose of gauging the need of the particular locality for air transportation, but in order to measure, in so far as we are able, the possible future financial reliance of the proposed route upon Government support. The cost of installing air navigation facilities for a proposed route which is required by the public convenience and necessity only if such installation were provided would also be proper for consideration.

Our determination as to the convenience and necessity of a proposed operation, in the light of the present and reasonably foreseeable requirements of the locality affected, must take into consideration the existing air transportation service rendered to the immediate and ad-

⁴“(a) The encouragement and development of an air-transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense; (b) the regulation of air transportation in such manner as to recognize and preserve the inherent advantages of, assure the highest degree of safety in, and foster sound economic conditions in, such transportation, and to improve the relations between, and coordinate transportation by, air carriers; (c) the promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; (d) competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense; (e) the regulation of air commerce in such manner as to best promote its development and safety; and (f) the encouragement and development of civil aeronautics.

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jacent areas. The act specifically declares that we shall consider, as being in accordance with the public convenience and necessity “competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense.”⁵ However, it is apparent that excessive competition may prove as detrimental as an inadequate amount of competition.⁶ Thus granting an applicant authority to enter a field already occupied may have the effect of diverting such revenues of an existing air carrier as would impair or tend to impair its ability to conduct an economical and efficient operation in the area served by it. In view of the statutory factors involved in the determination of fair and reasonable rates for the transportation of mail

ABSTRACTS

(Continued)

Order No. 452: Violations referred to the Attorney General for judicial action.

The Authority on March 29 referred to the Attorney General for judicial action the following cases involving violations of the Civil Aeronautics Act of 1938 and the Civil Air Regulations:

L. L. Hobbs, Houston, Tex.—For authorizing flight of his registered aircraft on a civil airway when said aircraft was not certificated as airworthy; and

Dorothy C. Lemon, West Palm Beach, Fla.—For giving flight instruction without being possessed of a valid instructor rating.

Order No. 453: This number assigned to order not yet released.

Order No. 454: James A. Geagin authorized to take depositions in Watson case.

The Authority on March 29 authorized James A. Geagin, Fort Worth, Tex., to take depositions in connection with the petition of Homer F. Watson, Downey, Calif., for reconsideration of his application for issuance of a student pilot certificate.

REGULATIONS

Regulation No. 67: Adopted amendment 43 of the Civil Air Regulations.

The Authority on March 29 adopted amendment No. 43 of the Civil Air Regulation entitled “Minimum Altitudes for Flight Instruction and Solo Practice.”

ANALYSES

(Continued from page 159)

to the airport after an engine failure instead of landing in an available emergency field, and the death of a passenger as he backed into a revolving propeller.

After completing a study of the February reports, the Regulation and Enforcement Division of the Civil Aeronautics Authority issued the following statement:

"According to the evidence presented in the Air Safety Board reports for February, violations of Civil Air Regulations appear to be factors in 11 of the accidents. Evidence of violations appeared in 7 reports involving fatalities, 1 involving serious injury, 2 involving minor injury, and 1 in which no one was hurt."

A total of 224 aircraft were involved in the 205 accidents, 19 of the accidents being the result of air or ground collisions in which 2 aircraft were damaged. There were 330 persons involved, 36 of whom received fatal injuries, 11 serious injuries, and 4 minor injuries, while 279 escaped unhurt. Damage to aircraft resulted in 21 planes being destroyed, 165 severely damaged, and 31 slightly damaged, while 5 were involved in accidents without becoming damaged.

under section 406 of the act, an increased burden to the Government by way of mail compensation might be expected to result. Thus, if a proper coordination of the services rendered by two or more air carriers over existing routes would adequately fulfill the need of the locality in question for air transportation, the public interest may require, because of the effect of the proposed operation upon an existing carrier, that the needed service be supplied by the establishment of adequate connections rather than by the inauguration of additional routes. In such a case, it would be unsound to grant authority to engage in air transportation over a proposed route, designed to supply through service as against an existing service rendered by two or more connecting carriers, until it had been shown that, with sufficiently developed airways, the connections provided and undertaken in good faith have, over a reasonable period of time, proved inadequate. In this connection, it is to be noted that section 404 (a) provides that it shall be the duty of every air carrier to provide reasonable through service in air transportation in connection with other air carriers; that section 1002 (i) provides that the Authority shall, whenever required by the public convenience and necessity, upon complaint or upon its own initiative, established through service and the terms and conditions under which such through service shall be operated, and that section 2 provides that we shall consider as being in accordance with the public convenience and necessity the regulation of air transportation in such a manner as to improve the relations between, and coordinate transportation by air carriers.

However, a proposed operation, even though it might divert substantial revenues of an existing air carrier, should not, in every case, be denied entry into the field on account thereof. In certain cases, the

¹ Sec. 2, par. (d) of the Civil Aeronautics Act of 1938.

² Sec. 2 of the act specifies the following as one of the factors to be considered as being in accordance with the public convenience and necessity: "(c) The promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices."

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benefits accruing to the air transportation system of the country from the proposed operation might exceed the disadvantageous effects resulting therefrom, so that the public convenience and necessity would require the granting of the application. Thus it is seen that, since the various factors in favor of granting a "new route" application, as well as those against it, may, in varying degree, have both a favorable and an unfavorable effect upon the public interest, the application of the test of public convenience and necessity must involve a constant balance of the various factors against each other in an attempt to attain the ultimate result of an air transportation system properly adapted to the present and future needs of commerce, the Postal Service, and the national defense. It is in accord with such principles that the Authority must, in the exercise of the broad discretion vested in it by the Congress, perform its duty of determining the requirements of the public convenience and necessity.

Although the various applications before us in the present proceeding depend upon interrelated considerations, they may be most conveniently discussed in terms of their effect upon the various localities concerned and the operations of the existing air carriers therein. Thus the application of Eastern for a route between Jacksonville and Miami

via Tampa will first be considered insofar as authorization is thereby sought to conduct an operation between Tampa and Miami.

TAMPA TO MIAMI

The granting of the Tampa-Miami portion of Eastern's Jacksonville-Tampa-Miami application is urged by Eastern in order that route No. 40, extending from Memphis and Atlanta to Tampa, might be continued approximately 200 miles into Miami, which Eastern contends is the logical terminus of the route. Tampa and Miami, as well as the intermediate points of Fort Myers,⁷ Sarasota and St. Petersburg, are presently served as part of National's route No. 31.

Miami and Tampa, Florida's second and third largest cities in 1930, identify, with Jacksonville, the three great trade areas of the State. Since 1930, the population of Miami, which is a winter resort and is the destination each year of many interstate visitors, has substantially increased. The summer tourist trade is also an important factor, and the year-around retail trade and shipping industries are substantial. With the Pan American System offering extensive service out of Miami, it is a gateway to Central and South America; and for volume of foreign air traffic, it far exceeds any other point in the United States. Tampa and St. Petersburg, which is within 20 miles of Tampa, are in an important resort area. Tampa is an active industrial city, the manufacture of cigars and the canning of citrus fruits being among its chief industries. Thirteen regularly scheduled steamship

⁷ Stops at Fort Myers are presently suspended pending airport improvements.

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lines serve the port of Tampa, on the Gulf of Mexico, and it is a leading export point for Florida phosphate, lumber, and canned citrus.

The gross postal receipts for Miami during the calendar year 1938 totaled \$1,527,915, or over twice those for Tampa. During the week of May 19 to 25, 1939, the average weight of air mail dispatched per day to points outside of Florida from Miami was nearly seven times that from Tampa; and for the year 1933, the passenger traffic revenue to and from Miami totaled \$4,261,819, as compared to \$1,717,346 for traffic to and from Tampa-St. Petersburg. Such figures, however, although showing to some extent the passenger and mail potentials of Miami and Tampa, obviously do not establish a greater community of interest between points on route No. 40 and Miami than exists between such points and Tampa.

Despite the importance of Tampa-St. Petersburg and Miami as trade centers, very little evidence tending to establish a community of interest between those points was introduced at the hearing. Nevertheless, the record indicates that in the year 1933, a total of 11,313 local railway passengers traveled between Tampa-St. Petersburg and Miami, as compared to 8,674 passengers moving between Tampa-St. Petersburg and Jacksonville. However, during the week of May 19 to 25, 1939, Tampa dispatched an average of 96.06 pounds of first-class mail and 13 ounces of air mail per day to Jacksonville, as against an average of 28.56 pounds of first-class mail and 13 ounces of air mail per day to Miami. Although the number of local railway passengers moving between Miami and Tampa in the year 1933 was approximately 92 percent of that between Miami and Jacksonville,

it does not follow that comparable requirements for local air transportation exist over the two airways. Eastern maintains five round trips daily between Miami and Jacksonville, but it appears that approximately 85 percent of Eastern's passengers in and out of Miami originated or were destined for points outside the State of Florida. Furthermore, it is not clear that even local traffic between Miami and Tampa has kept pace, since 1933, with that between Miami and Jacksonville. During the period from May 19 to 24, 1939, the first-class mail dispatched from Miami to Jacksonville averaged 143 pounds per day as compared to 36.12 pounds per day to Tampa.

Some indication of the local air-line passenger potential between Miami and Tampa is given by the operations of National. Although National's route No. 31 was extended from St. Petersburg to Miami in July of 1937, but 1 round trip per day was operated between those points as of the date of the hearing. During the months of January, February, and March, 1939, National operated the Miami-St. Petersburg portion of route No. 31 with load factors, computed on the basis of no larger than 10-place equipment, of 39.53, 53.65, and 56.69 percent, respectively. However, during the year 1938, although the load

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factor for the same 3 months was 25.13, 46.72, and 47.88 percent, respectively, it dropped to 30.76 percent in April 1938 and to as low as 11.04 percent in September 1938. We have carefully considered the present and estimated future local passenger and mail potential between Miami and Tampa-St. Petersburg on a year-around basis, and find that local traffic does not justify the inauguration of a second air transportation service between Miami and Tampa.

Eastern relies mainly, however, upon the traffic and potential traffic which may be expected to flow to Miami through Tampa from points on its route No. 40 and beyond. No connection for traffic flowing to Miami is presently provided at Tampa, an overnight lay-over being necessary for both northbound and southbound flights.

On route No. 40, as of the date of the hearing, Eastern operated a daily round trip between Atlanta and Tampa via Tallahassee, and a daily round trip except Sundays and holidays between Memphis and Tallahassee, the southbound and northbound flights of which connected at Tallahassee with the southbound and northbound flights, respectively, of the Atlanta-Tampa schedule. Since the inauguration of the Atlanta-Tampa section of the route in the fall of 1938, revenue passenger load factors for the various segments of the route, computed on the basis of Douglas DC-2, 14-passenger equipment, have ranged from 19 to 42 percent, as shown by the following table:

	Atlanta-Tampa	Memphis-Tallahassee
	Percent	Percent
1938		
October.....	23	
November.....	33	
December.....	25	
1939		
January.....	28	
February.....	¹ 32	19
March.....	¹ 42	20
April.....	¹ 39	24
May.....	¹ 38	23

¹ Includes passengers transferring to and from the Memphis-Tallahassee leg at Tallahassee.

The average mail loads on route No. 40 in pounds per month for the period October 1, 1938, to March 31, 1939, were 36, 39, 47, 44, 64, and 69.

Route No. 40 connects with Chicago and Southern Air Lines, Inc., and American Airlines, Inc., at Memphis, and with Delta Air Corporation at Birmingham. Traffic originating at St. Louis, Kansas City, and other points in the west on the route of Transcontinental & Western Air, Inc., can be routed from St. Louis to Memphis over Chicago

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and Southern Air Lines, Inc., and from Memphis to Tampa over Eastern's route No. 40. However, because of the lack of a connection at Tampa between National and Eastern, passengers to Miami from St. Louis are transferred to Eastern at Indianapolis and routed to Jacksonville over route No. 10 and thence to Miami over route No. 6. Likewise, passengers from Memphis and the Southwest travel over American Airlines, Inc., to Nashville and then southeast over Eastern's routes. Passengers from Birmingham and Montgomery are routed to Atlanta and then south on route Nos. 10 and 6.

The routing of air mail from the points in question is, in general, substantially the same, although route No. 40 is used to some extent. Eastern contends that such a method of routing has the effect of "overburdening" route No. 10. On certain heavy mail flights, it is necessary to block out as many as four seats, although, of course, it is not clear to what extent the mail loads carried on route No. 10 would be carried on route No. 40 if that route were extended into Miami. Since it is possible, in air transportation, to add such schedules as are required by the traffic, the contention of Eastern is not compelling. It is true that the record indicates that the passenger loads presently carried on route No. 40 do not require an additional schedule, but it is not reasonable to assume that the mail load carried on route No. 10, in relation to the number of schedules operated, will forever remain constant. If, in the future, the passenger and/or mail loads carried should decrease, or the passenger loads should increase to the extent of warranting an additional schedule, the problem will have largely solved itself. Also, it appears from the testimony of the Superintendent of Air Mail Service of the Post Office Department, that larger mail loads would be routed by way of route No. 40 than are presently carried thereon if a better connection were provided at Tampa by Eastern and National.

Although the record indicates that a substantial amount of mail originating at cities on route No. 40 and points beyond is presently sent over route Nos. 10 and 6, the volume of passenger traffic from these points which is so routed is not clear. Atlanta, Birmingham, Memphis, and Montgomery, the principal points on route No. 40 outside the State of Florida, have presently estimated populations of 400,000, 297,000, 288,250, and 80,000, respectively. The record contains evidence as to the industrial importance of each of these cities and indicates that there is a flow of commerce between them and the State of Florida, and, to some extent, Central and South America. However, no evidence was produced by which the traffic potential between these points and Florida can be gaged or by which the effect thereon of the Tampa-Miami extension as compared to the effect of better connections between Eastern and National can be measured. The record also indicates that there is a certain amount of commercial

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intercourse between Tampa and the West Indies, Central America, and South America. The cities on route No. 40, including Tampa, desire a through service to Miami, but, in general, it may be said that what is principally sought is increased schedule frequencies. As is more fully discussed in connection with Eastern's proposal to operate between Tallahassee and Orlando, a need for direct service between Miami and Tallahassee, the State capital, was urged.

The following table shows the number of railway passengers traveling in 1933 between various points within the territory served by route No. 40 and Tampa, as compared to the number between such points and Miami:

Railway passengers traveling between.....	Tampa	Miami
Memphis.....	98	269
Alabama.....	715	798
Mississippi.....	76	140
Southwestern States.....	852	2,364
Total.....	1,741	3,571

By grouping the above points, Eastern argues that twice as many potential passengers within the territory served by route No. 40 desire to go to Miami as to Tampa. However, in view of the small loads carried on route No. 40, which roughly measure the present air-line traffic flow between the territory served by route No. 40 and Tampa, it is not clear that a traffic potential of two times that presently carried on route No. 40 would warrant an additional air transportation service between Tampa and Miami. On the other hand, it is probable that the resulting increase in schedule frequency would develop some additional traffic on route No. 40.

The record indicates that in the operation of route No. 40, there is a lay-over of one airplane each night at Atlanta, Tallahassee, and Tampa. Extending route No. 40 into Miami would enable Eastern to effect greater utilization of this equipment, and obviate the difficulty presently encountered of routing its airplanes into Miami where its chief overhaul shops are located.

As hereinbefore noted, it is pertinent in a new route proceeding to consider the probable degree of self-sufficiency of a new route, not only as one of the factors tending to indicate the need for such service, but also for the purpose of obtaining a general basis of estimating the degree of reliance of the route upon Government support. At the hearing, a consolidated 5-year forecast of the additional revenues to be realized and expenses to be incurred by virtue of the sum total of its proposed operations was submitted by Eastern. The forecast, however, does not represent the carrier's estimate of the revenues actually to be realized, for the reason that a revenue passenger load factor which would show a profit over the forecast expenses was arbitrarily assumed. The traffic witness for Eastern testified that, if the extension from Tampa to Miami were granted, the load factor on route No. 40 would increase so as to equal the system load factor. The nonmail revenues which Eastern has realized over its entire system

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for the 12-month periods ended June 30, September 30, and December 31, 1938, and March 31, 1939, were 47.38, 48.07, 50.04, and 52.22 cents per revenue mile, respectively, but such amounts represent load factors of 50.11, 50.17, 52.22, and 53.74 percent. Considering the demand for service and probable traffic flow between Miami and Tampa and points beyond, the fact that the proposed extension would parallel an established route, and the small loads carried over route No. 40 in the 8 months ended May 31, 1939, it appears that loads comparable to those carried over its system as a whole would not be realized on the proposed Tampa-Miami extension for some time in the future.

In estimating the future expenses, Eastern included only those expenses which would be incurred, over present system expenses, as a result of the proposed operation. Thus direct flying depreciation, traffic and advertising, and general and administrative expenses were omitted from the forecast, and indirect flying expenses greatly curtailed. The record indicates that the proposed operations could be conducted at a relatively small additional cost, but the argument that operations can be increased without an additional burden of traffic solicitation or administration, although often heard, remains unpersuasive. The forecast for additional expense involved in the first year's operation amounts to 27.32 cents per revenue mile as compared to system operating expenses for the 12-month periods ended June 30, September 30, and December 31, 1938, and March 31, 1939, of 60.44, 61.66, 62.78, and 62.27 cents per revenue mile, respectively.

Because of the fact that the system of Eastern is designed primarily to attract long-haul traffic, it is argued by Eastern that granting it a certificate to operate between Tampa and Miami would not adversely affect the operations of National. However, it does not follow that, because 85 percent of Eastern's Miami traffic was interstate, the same would necessarily hold true for route No. 40 as proposed to be extended. Although the proposed schedules of Eastern are not seriously competitive with those presently operated by National, there cannot and should not be assurance that they would forever remain so. It is clear that the service of Eastern, offering larger equipment than that offered by National, would have the effect of diverting a substantial part of National's local traffic between Tampa and Miami. It has been

pointed out that local traffic between Tampa and Miami does not warrant the services of two air carriers, and the importance of this segment to National's route No. 31 is shown by the fact that it represents over 50 percent of the miles of this route.

It is pertinent to note that the problem of routing both passenger traffic and mail from route No. 40 into Miami would be solved by adequate connections at Tampa. The Memphis-Tallahassee, Tallahassee-Tampa, and Tampa-Miami airways are to be developed

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with funds which are now available, and when it thus becomes possible to operate other than daytime contact flights, improved connections should result. The flight between Tampa and Miami is now made by a trip of National in 1 hour and 35 minutes as compared to a proposed 1 hour and 20 minutes by Eastern. Although a stop at Fort Myers on National's route No. 31 is presently suspended pending airport improvements, it should not consume more than an additional 20 minutes when operations are resumed. It is argued by Eastern that National will be unable to supply the schedule frequency and size of equipment necessary to carry the through traffic into Miami. It appears, however, that National is able to carry the through traffic presently developed, and that it will be able to supply the additional schedules necessary for carrying such increased loads as may result from improved connections.

Although the record indicates that there is a certain amount of potential passenger and mail traffic from route No. 40 and points beyond to Miami, the operation by Eastern between Tampa and Miami would seriously impair the ability of National to conduct an economical and efficient operation. The public interest in obtaining a through service for such traffic does not outweigh the counter interest in assuring the continued efficient operation of route No. 31 which serves various points in Florida not supplied or proposed to be supplied with air service by Eastern, and which is the only route operated in Florida by an air carrier other than Eastern. This is especially so in view of the fact that the prospective connection between National and Eastern will largely supply the service needed by points on route No. 40. Although the connection will not solve Eastern's problem with respect to equipment utilization and the routing of its airplanes to Miami for overhaul, the benefits derived by the public through the solution of such problem are indirect, and, considering all factors, do not call for a different conclusion. The same is true of such benefit as might redound to the public through the operation of the Tampa-Miami portion of the proposed route in connection with the portion thereof extending between Tampa and Jacksonville which is discussed hereinafter. On the basis of the foregoing findings and the entire record in this case, we find that the public convenience and necessity do not require air transportation by Eastern between Tampa and Miami.

TAMPA TO JACKSONVILLE

The Tampa-Jacksonville portion of Eastern's Jacksonville-Tampa-Miami application will be considered in connection with the various proposals of National, all of which would have the effect of providing a through service between Tampa and Jacksonville. Passengers and

mail between those points are presently routed from the Tampa-St. Petersburg area over National's route No. 31 to Orlando and Daytona

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Beach at both of which points it connects with Eastern's route No. 6 from Miami to Jacksonville and Newark. For the period November 19, 1934, to July 15, 1937, however, National's route extended beyond Daytona Beach and into Jacksonville.

Jacksonville is Florida's largest city and its most important industrial center. It serves as the northern gateway to the State and is one of the largest seaports on the southeastern seaboard. During the year 1938, Jacksonville's gross postal receipts totaled \$1,311,710, and during the period from May 19 to 25, 1939, air mail received averaged 101.81 pounds per day.

Between the 2 industrial cities of Tampa and Jacksonville, there is a strong community of interest and a substantial flow of local commerce. The combined schedules of the Atlantic Coast Line Railroad and the Seaboard Air Line Railway provide 6 daily round trips and 1 additional round trip 3 times per week between Tampa and/or St. Petersburg and Jacksonville, 5 of which schedules are routed via Ocala and Gainesville. Ten round trip bus schedules are maintained daily between St. Petersburg, Tampa, and Jacksonville. A total of 8,674 railway passengers traveled between Tampa-St. Petersburg and Jacksonville in the year 1933, and during the period May 19 to May 25, 1939, Jacksonville dispatched 796 pounds of first-class mail to Tampa, which amount was exceeded by that dispatched to Miami by only 54 pounds. During the same period, Tampa dispatched over 672 pounds of first-class mail to Jacksonville.

There is also a substantial flow of through traffic between Tampa-St. Petersburg and Jacksonville and points to the North. Each year a large amount of canned citrus and other Florida products are sent from Tampa to all points in the United States, but principally to points east of the Mississippi. The number of air express shipments to and from Tampa have steadily increased, reaching a peak of 361 in the month of March 1939. Approximately 60 percent of the air express traffic in and out of Tampa during the period January 1, 1937, to April 30, 1939, was destined to or received from points in the East.

However, despite the substantial through and local passenger and mail potential between Jacksonville and Tampa, no adequate air line service is maintained between them. As of the date of the hearing, National provided two daily round trip schedules between St. Petersburg, Tampa, and Orlando, one of which continued on to Daytona Beach. Eastern's schedules provided five daily round trips between Jacksonville and Miami, three of which were operated between Newark and Miami, and two of which were operated between Chicago and Miami. Two stops were made in each direction at Orlando by the Chicago flights and one at Daytona Beach by a Newark flight. As many as seven to nine additional schedules are operated between Miami and Jacksonville during the peak winter season. Because of

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the fact that the flights of Eastern must be arranged to suit the convenience of traffic flowing between such distant points as Chicago and Newark and Miami, the schedules of National must necessarily be

adapted to those of Eastern. The flights of National from Daytona Beach and Orlando, carrying northern mail received from Eastern, arrived in Tampa at 6:40 a. m. and 10:05 p. m. and at St. Petersburg at 7 a. m. and 10:25 p. m. From a mail standpoint, of course, the evening flights offered no better service than those arriving the following morning. Destined for Orlando and Daytona Beach for connection with Eastern to northern points, the flights of National left St. Petersburg at 7:20 a. m. and 8:05 p. m. and Tampa at 7:35 a. m. and 8:20 p. m. It appears that because of the early departure of the morning flight, mail deposited in St. Petersburg between 6:45 and 11:30 a. m. was dispatched to Jacksonville by train. The one daily flight of Eastern stopping at Daytona Beach arrived southbound at 4 a. m. and left northbound at 2:15 a. m., thus affording a most inconvenient passenger connection.

In addition, there are a number of connection failures at Orlando and Daytona Beach on account of weather conditions. On such occasions, southbound passengers and mail proceed from Jacksonville to the Florida west coast by train, or are carried over Orlando to Miami and there redispached for Tampa where they arrive many hours late. The records of the Post Office Department show that of 795 connections scheduled at Daytona Beach during the 14-month period from April 1, 1938, through May 31, 1939, a total of 71, or 8.9 percent thereof were missed, although on 12 of these occasions connection was made at Orlando. Forty-seven of these failures to connect occurred in the 5-month period from November 1, 1938, to March 31, 1939, for a record of 15.6 percent connection failures. Connections were somewhat more favorable at Orlando where, although considerably more were scheduled, there were 57 and 38 failures during the above 14-month and 5-month periods respectively. On one of these occasions, connection was made at Daytona Beach. In the majority of cases, the delay responsible for these failures to connect was due to unfavorable weather conditions. However, on April 6, 1939, a radio station was placed in operation at Daytona Beach which should facilitate connections to some extent.

National proposes to offer a more adequate service between Tampa and Jacksonville by operating into Jacksonville via Daytona Beach, a distance of 93 miles, or from Lakeland via Ocala and Gainesville, involving a distance of approximately 180 miles, or by way of both such proposed routes. Although the testimony was conflicting as to whether weather conditions at Jacksonville are, in general, more favorable than those at Daytona Beach and Orlando, it appears that the service would be greatly improved with National operating into

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Jacksonville. Since fog conditions may exist at Daytona Beach and not at Jacksonville, and vice versa, the additional point for connections should eliminate a portion of the failures. Furthermore, Jacksonville is the "bottle neck" where Chicago and Newark flights converge to continue into Miami, and offers 5 flights in each direction per day with as many as 7 to 9 additional schedules during the peak of the winter season. Thus, if National were delayed into Jacksonville by reason of weather conditions or otherwise, the chance of securing air transportation north on a later flight would be greatly increased over that at Daytona Beach or Orlando. Likewise, although ground

transportation facilities appear to be inadequate from Orlando and Daytona Beach, there are 15 northbound railway schedules out of Jacksonville each day. The greater number of schedules provided by Eastern at Jacksonville would also offer a wider range of possible connections, thus enabling National to adapt its schedules more nearly to the needs of the territory served by it.

It is obvious that service between Jacksonville and the Florida west coast would also be improved by the proposed operation of Eastern through to Tampa, a distance of approximately 175 miles. Although the inconvenience resulting from connection failures at Daytona Beach and Orlando could thus be eliminated, National, unless also permitted to operate into Jacksonville, would still be required to adapt its schedules to those few schedules of Eastern which stop at Daytona Beach and Orlando. The direct service offered by Eastern would, of course, be faster than that offered by National, and larger equipment would be employed. However, there was no showing that the 10 passenger Lockheed Electras operated by National would not be adequate for the service.

Representatives of Savannah and Charleston on Eastern's route No. 6 favored Eastern's proposal and the direct service to Tampa which would thereby result. It appears, however, that improved connections between Eastern and National at Jacksonville would meet the requirements of those cities. In large part their desire was for such additional schedules as might result from the operations of flights through to Miami via Jacksonville and Tampa, and did not particularly reflect a need for service to and from Tampa. Although it is true that a substantial part of the potential through traffic to Tampa represents tourist travel originating at northern points, it is pertinent to note that traffic from Richmond and points north can presently be routed through to Tampa via Eastern's route No. 5 to Atlanta and thence south to Tampa over its route No. 40. The distance between New York and Tampa via Atlanta exceeds that via Jacksonville by 202 miles.

It is urged by Eastern that granting it authority to operate between Jacksonville and Tampa and on into Miami over the Tampa-Miami

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portion of the proposed route, hereinbefore discussed, would enable it to complete certain Newark-Miami flights which are held up at Jacksonville on account of fog. During the period June 1, 1937, to May 31, 1939, Eastern was unable to stop at Jacksonville 149 times while on 130 of these occasions the airport at Tampa was open, and it was testified that on many of these occasions it would have been possible to effect a landing at Miami. The record does not show whether the meteorological conditions at possible intermediate refueling points south of Orlando on the east coast were also suitable for operations on the days in question. Although it is possible to operate nonstop from Charleston and Savannah to Miami on route No. 6 with certain load restrictions, greater loads could be carried over Jacksonville and into Tampa where the airplanes could be refueled for the flight to Miami.

Although Eastern's proposed operation could be flown between Jacksonville and Tampa, direct, on a day-time contact basis only, the schedules could be operated on instrument and at night by flying the

fully equipped airways from Jacksonville to Daytona Beach to Tampa, a distance of approximately 60 miles greater than the direct route. National's proposed extension into Jacksonville from Daytona Beach would of course be flown over the fully equipped airway between those points, but there is no airway which would serve the alternate proposal of operating between Lakeland and Jacksonville via Gainesville and Ocala. To install an airway for this route, fully equipped with field and lighting facilities and necessary radio stations would cost approximately \$144,100, and the annual maintenance would average \$35,800.

The forecast of National for the first year's operation of its system, including its proposed routes, shows a nonmail revenue of 14.20 cents per revenue mile, representing a load factor of 35 percent. This figure compares with nonmail revenues realized in the operation of its system for the 12-month periods ended June 30, September 30, and December 31, 1938, of 11.01, 11.68, and 10.89 cents per revenue mile, respectively. These figures represent the respective revenue passenger load factors of 22.56, 22.57, and 22.81 percent. The decline in the system operating revenues to 10.89 cents per mile for the year ended December 31, 1938, is explained in part by the fact that passenger operations on route No. 39 were inaugurated in December of 1938 in which month its load factor was only 5.25 percent. Furthermore, the greatly improved service which would result from an extension of route No. 31 into Jacksonville should yield greater passenger loads between Tampa and Jacksonville than those presently carried between Tampa and Daytona Beach. If the extension into Jacksonville from Daytona Beach were granted, and that from Lake-

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land via Ocala and Gainesville were denied, no possible diversion of revenues from other portions of the route could result.

National forecasts total operating expenses of 39.40 cents per revenue mile for the first year's operation. This figure includes 0.20 of a cent additional fixed costs at Ocala, representing \$2,000 for the year. However, no figure covering additional fixed costs at Jacksonville and at Gainesville, where stops could not be made pending the installation of an adequate airport, was included. The record shows that one to two additional first pilots and two copilots would be required, but it was not shown that the per mile cost for these items would be thereby increased. In view of the fact that total operating expenses for the system were 37.41, 37.65, and 37.54 cents per revenue mile, respectively, for the 12-month periods ended June 30, September 30, and December 31, 1938, the forecast of 39.40 cents per revenue mile does not seem unreasonable, especially in view of the fact that by connecting the two routes of National, certain ferry flights between Jacksonville and Daytona Beach would be eliminated. If the forecast nonmail revenue and expense figures of 14.20 and 39.40 cents per revenue mile, respectively, are applied to the mileage involved in operating one round trip per day from Lakeland to Jacksonville via Ocala and Gainesville, on the basis of a year's operation and 99 percent schedule performance, the operating expenses would exceed nonmail revenues by \$32,781.67. On the same basis, but eliminating the allowance for fixed costs at Orlando, the expenses involved in the opera-

tion of one round trip per day between Daytona Beach and Jacksonville would exceed nonmail revenues by \$16,802.78.

The principal function of that part of National's route No. 31 extending between St. Petersburg and Daytona Beach, has been that of supplying a connecting service between the Florida west coast and Eastern's route No. 6. During the period January 1, 1938 to March 31, 1939, National carried 3,876 passengers on that portion of its route between St. Petersburg and Daytona Beach. The records of Eastern show that the maximum number of passengers transferred between the two applicants at Daytona Beach and Orlando was 2,002 for the same period. Thus, National carried only 1,874 local passengers on the St. Petersburg-Daytona Beach segment of route No. 31, or less than one-half of the total passengers carried thereon. If Eastern were to operate directly from Jacksonville to Tampa, few passengers would travel between those points over the connecting service offered at Daytona Beach by National. Although the record shows that 487 of the 2,002 connecting passengers carried by the applicants were destined for points on National's route other than Tampa and St. Petersburg, and that a portion of such connecting passengers probably originated at points other than Tampa and St. Petersburg, it is evident that such diversion of traffic flowing between the Florida west coast and Jackson-

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ville and points beyond as would result from Eastern's proposed operation would have a most serious effect upon National's nonmail revenues realized from the operation of route No. 31.

Even if both applicants were authorized to operate between Jacksonville and Tampa it seems clear that the net result would be seriously disadvantageous to the operations of National. Although the proposed operation of National would be adequate for serving the local traffic between Jacksonville and Tampa, the major part thereof would be attracted by the more direct service and larger equipment which Eastern would provide. National would, of course, attract even a lesser proportion of the traffic originating at points beyond Jacksonville with Eastern operating directly from such points through to Tampa.

The importance to National of preserving its share of the traffic between Tampa, Jacksonville, and points beyond is indicated by the small air line traffic potential of that part of route No. 31 between Tampa and Daytona Beach which would be unaffected by Eastern's proposed operation. In 1930, the populations of Lakeland, Orlando, and Daytona Beach were 18,554, 27,330, and 16,598, respectively, while the distances between Tampa and Lakeland, Lakeland and Orlando, and Orlando and Daytona Beach average less than 50 miles each. The following table expresses to the nearest *ounce* the daily average of air mail dispatched during the period from May 19 to 25, 1939, between the various points on route No. 31 between Tampa and Daytona Beach:

To.....	Tampa	Lakeland	Orlando	Daytona Beach
From.....	Ounces	Ounces	Ounces	Ounces
Tampa.....		12	3	2
Lakeland.....	1		0	0
Orlando.....	3	0		19
Daytona Beach.....	4	2	5	

Although we find that through air transportation is required between Jacksonville and Tampa, and that such need would be supplied by the proposed operation of Eastern, it is clear, since such need would also be supplied by either of the proposed operations of National, that the factors in favor of authorizing the proposed service of Eastern are outweighed by the effect which it would have upon the operations of National. On the other hand, no contention that the proposed operations of National would seriously affect the existing operations of Eastern was made. Although some of Eastern's traffic between Jacksonville, Daytona Beach, and Orlando would be diverted, it would represent only a small proportion of the total passenger miles operated by

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Eastern over its system. The 2,002 connecting passengers carried by Eastern between those points during the period from January 1, 1938, to March 31, 1939, represented less than 0.3 percent of the total revenue passenger miles operated by Eastern over its system during the same period. It is true that if Eastern were granted authority to operate not only between Jacksonville and Tampa, but also from Tampa into Miami, a higher proportion of fully loaded flights from Newark to Miami could be completed. However, this increased efficiency would be accompanied by the serious diversion of traffic presently carried by National between Tampa and Miami, hereinbefore noted. On the basis of the foregoing considerations and findings of fact and the entire record in this case, we find that the public convenience and necessity do not require air transportation by Eastern between Jacksonville and Tampa and that the substantial evidence of record in this case shows that the public convenience and necessity require air transportation with respect to persons, property and mail by National between Jacksonville and Tampa via certain intermediate points as hereinafter specified.

It has been seen that National has applied for authority to engage in air transportation between Daytona Beach and Jacksonville, or between Lakeland and Jacksonville via Gainesville and Ocala, or by way of both such proposed routes. Although Gainesville and Ocala are not served at present with air transportation, it appears, for reasons hereinafter discussed in connection with Eastern's proposed route from Tallahassee to Orlando, that neither would develop any substantial air-line traffic. Therefore, since the airways between Jacksonville and Tampa via Daytona Beach are presently equipped for night and instrument flight, and since there are no airway facilities between Lakeland and Jacksonville via Ocala and Gainesville, we find that the public convenience and necessity require that the extension of National's route into Jacksonville be made by way of Daytona Beach and not by way of Ocala and Gainesville.

The examiners recommended that the extension into Jacksonville be made from Orlando rather than Daytona Beach. The certificate of public convenience and necessity covering Daytona Beach and other points on route No. 31 was issued to National under section 401 (e) (1) of the act, the so-called "grandfather" clause, so that, under the act, National was not required in that proceeding to show that the public convenience and necessity required air transportation between the points designated in such certificate. It does not appear that substantial local air-line traffic presently originates at Daytona Beach or that it may be expected to do so within a reasonable period of time in the future. However, authorization to abandon that part of route No. 31 extending between Orlando and Daytona Beach was not sought in the present proceeding, and it would be impossible to give

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consideration to the elimination of the stop at Daytona Beach without due notice to the public and interested parties and a public hearing with respect to the issues involved.

TALLAHASSEE TO ORLANDO

Eastern's proposed operation between Tallahassee and Orlando via Ocala, a distance of approximately 225 miles, is, with respect to the effect which it would have upon route No. 40, similar to the proposed extension from Tampa to Miami, hereinbefore discussed. The proposed Tallahassee-Orlando route would enable Eastern to operate a through service from Memphis to Orlando, via Tallahassee, and thence into Miami on route No. 6. Thus, like the proposed Tampa-Miami extension, the proposed Tallahassee-Orlando route would permit the routing of traffic from Montgomery, Memphis, St. Louis, and points beyond to Miami by way of route No. 40 rather than over the longer distance via Eastern's route Nos. 10 and 6.

However, the proposed route from Tallahassee to Orlando via Ocala is not equipped with air navigation facilities so that neither night nor instrument operations could be conducted thereon. Making allowance for such facilities on existing routes as could be used in the operation of this proposed route, it appears that to install complete facilities thereon would cost approximately \$55,500 and the maintenance thereof would average approximately \$14,800 per year. On the other hand, it has been seen that the Tampa-Miami airway, comprising a part of National's route No. 31, is to be developed with funds appropriated for use in the fiscal year 1940, and that better connections between Eastern and National at Tampa should then be possible.

When the Tampa-Miami airway is completed, there will be, with the facilities presently installed on route Nos. 10 and 6, two alternative methods of routing traffic, originating on route No. 40 and points beyond, over fully equipped airways into Miami. In view of the service available by way of these alternative routings, such Miami traffic as will be developed on route No. 40 does not appear to require the additional service by way of the unlighted Tallahassee-Orlando proposed route. Although it is true that the method of routing traffic from Memphis and points beyond via route Nos. 10 and 6 is indirect, the alternative routing by way of route No. 40 to Tampa

and thence over National's route No. 31 is approximately 3 miles shorter than by way of the proposed Tallahassee-Orlando route.

It is true that if Eastern were enabled to route idle equipment into Miami from Tallahassee by way of Orlando, greater utilization thereof would be effected, and the overhaul base at Miami would be more accessible. However, the proposed Tallahassee-Orlando operation

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would not eliminate the dead end of route No. 40 at Tampa, so that equipment utilization and overhaul economy would be effected in lesser degree than by the proposed Tampa-Miami route.

The intermediate point Ocala on the proposed Tallahassee-Orlando route is not presently provided with scheduled air-line service. Eastern's proposal would not only provide such service for Ocala, but also for Leesburg and Gainesville, both within 38 miles thereof. This area is important agriculturally, and lime rock and tung oil, as well as citrus, are shipped from Ocala to points throughout the United States. Silver Springs, an important tourist center, is nearby, and the University of Florida with a student body of approximately 3,000 is located at Gainesville. However, the combined population of Ocala, Gainesville, and Leesburg was only 21,859 in 1930. Although there is no direct train service between this area and Tallahassee, a distance of approximately 175 miles, both Ocala and Gainesville are served by the Atlantic Coast Line Railroad and the Seaboard Air Line Railway running between Tampa-St. Petersburg and Jacksonville, and providing four daily round trip schedules and one additional round trip schedule three times a week. In addition, the air-line services of both National and Eastern are available at Orlando, Daytona Beach, and Jacksonville, which are approximately 85, 80, and 110 miles from Ocala, respectively. Although neither Ocala nor Gainesville is served with air transportation, it is reasonable to assume that, with adequate train service to Jacksonville, the combined train-plane service for air mail destined to distant points would offer a substantial saving in time over the regular mail service. Yet the daily average of air mail dispatched to points outside of Florida during the period from May 19 to 25, 1939, was only 2.68 pounds from Ocala and 4.68 pounds from Gainesville. In each case the greatest proportion thereof was dispatched to the eastern seaboard. During the same period, only 3.63 pounds of *first-class* mail originating at Ocala was dispatched per day for Tallahassee as against 22.88 pounds dispatched for Jacksonville. Local first-class mail dispatched from Gainesville to Tallahassee averaged only 12 pounds per day as compared to 42 pounds to Jacksonville. Thus it appears that a greater commercial activity exists between Gainesville-Ocala and Jacksonville than between those points and Tallahassee. In view of the existing train service to Jacksonville, the small populations of Ocala, Gainesville, and Leesburg, their relative proximity to points served by scheduled air transportation, and their apparent small air mail potential, we find that no substantial air-line traffic would be developed at Ocala, and through Ocala, at the nearby points of Gainesville and Leesburg.

One of the chief factors urged in favor of the proposed route from Tallahassee to Orlando via Ocala was that it would provide direct air line service from Tallahassee, the capital of Florida, to Miami and

points on the lower east coast. Because the State supreme court and many State and Federal agencies are located there, lawyers and State government officials from all points in Florida are frequently required to travel to and from Tallahassee. The distance from Miami is approximately 500 miles; from West Palm Beach, 440 miles; and from Orlando, 252 miles. Despite this fact, train service from these points and the surrounding area to Tallahassee is indirect and inadequate. Train schedules to Tallahassee from Miami, West Palm Beach, and Orlando require approximately 15, 14, and 10 hours, respectively, whether by way of Tampa or Jacksonville. The inadequacy of these schedules appears to be explained in part by the excellent highways into Tallahassee.

Air service is provided to Tallahassee from Miami and West Palm Beach, either via National's route No. 31 from Miami to Tampa, and thence over route No. 40 to Tallahassee, or by Eastern's route No. 6 to Jacksonville and by National's route No. 39 from Jacksonville to Tallahassee. It has been seen, however, that an overnight lay-over is required at Tampa, and a lay-over of 3 hours and 45 minutes was required at Jacksonville under schedules in effect at the date of the hearing. Because of the delay occasioned by such connections, it appears that only small use is made of the available air service. The routing by way of Jacksonville is also available from Orlando, and there is an alternative routing by way of National's route No. 31 to Tampa, and Eastern's route No. 40 from Tampa to Tallahassee. Schedules in effect at the date of the hearing provided approximately a 15-minute connection by way of the latter routing, enabling one to leave Orlando at 6 a. m. and arrive in Tallahassee at 8:25 a. m. On the return trip, a 1-hour-and-35-minute connection was provided. However, the witness representing the city of Orlando testified that this service was rarely used because of the fear that the connection at Tampa would be missed, although he admitted having no information as to how frequently it had failed in the past.

The record does not indicate that any substantial traffic would flow from Miami and the lower east coast to Tallahassee except that arising by virtue of the location of the State capital. The population of Tallahassee in 1930 was only 10,700, and during the week of May 19 to 25, 1939, the total air mail received averaged only 16.50 pounds per day. During the same period, the total first-class mail dispatched from Tallahassee to Miami, West Palm Beach, and Orlando averaged only 26.13, 5.25, and 10.13 pounds per day, respectively, as against 67.63 pounds dispatched per day to Jacksonville. The record does not show whether the legislature was in session during the period in which this mail count was taken.

It has been seen that few passengers destined to Tallahassee from Miami go by way of National's route No. 31 to Tampa for connection

with Eastern's Tallahassee flight. On the other hand, because of the good connection made between National's flight from Orlando to Tampa and Eastern's Tampa-Tallahassee flight, it seems inevitable, despite the contrary testimony of the witness from Orlando, that a certain proportion of traffic originating in the Orlando area would

utilize route No. 31 to Tampa. The record also indicates that some of the lower east coast traffic destined for Tallahassee flows by way of Jacksonville and over National's route No. 39. The major part of this traffic and of that originating in the Orlando area would be diverted by the proposed through service of Eastern from Orlando to Tallahassee by way of Ocala.

It has been seen that traffic originating on route No. 40 and points beyond does not require the proposed service over the unequipped airway from Tallahassee to Orlando, via Ocala, because of the two existing alternative methods of routing such traffic into Miami. Furthermore, the Tallahassee-Orlando proposed operation would tend to isolate Tampa and prevent its being supplied with such schedule frequency as it may require. This factor outweighs the indirect benefit which the public would receive by virtue of the economies which Eastern would effect by greater equipment utilization and a more efficient overhaul procedure. Although there is some need for a more adequate service between the lower east coast of Florida and Tallahassee, it is pertinent to note that Tallahassee is the point of intersection of Eastern's route No. 40 and National's route No. 39, running from north to south and from east to west, respectively. By virtue of these routes, Tallahassee is supplied with air transportation to every important city within the State of Florida. Although the record indicates that connection between the schedules of Eastern and National are inadequate, the actual flying time from Miami to Tallahassee by way of Jacksonville and Tampa, respectively, is only $3\frac{1}{2}$ and 3 hours, as compared to 3 hours over the proposed route between Tallahassee and Orlando. Because of the apparent adequacy of the existing routes, it appears that improved connections between the schedules of National and Eastern would meet the requirements of traffic between Tallahassee and the lower east coast of Florida. It is reasonable to assume that such connections will be supplied when construction of the Tampa-Miami airway is completed. In view of our power to compel connecting services, if necessary, and considering also the fact that the proposed operation would divert a certain limited amount of traffic carried on the routes of National, we find, on the basis of the above findings of fact and the entire record herein, that the public convenience and necessity do not require air transportation by Eastern between Tallahassee and Orlando via Ocala.

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FITNESS, WILLINGNESS, AND ABILITY OF NATIONAL

It is contended by Eastern that National is not fit, willing, and able properly to perform the air transportation proposed by it either from an operating or a financial standpoint.

National owns and operates 4 Lockheed Electra airplanes, accommodating 10 passengers each. These airplanes, all purchased in a used condition, were acquired in September 1937, July 1938, September 1938, and May 1939, respectively. A Stinson Model U trimotor airplane is also owned by National and is to be used primarily as a training ship. It is not clear, if an all Lockheed service is to be operated, whether a fifth Lockheed would be required in the operation of the system, including the proposed service between Daytona Beach

and Jacksonville. However, the president of National testified that an additional Lockheed would be purchased if it were needed.

A detailed plan of operation of the proposed service was not submitted by National at the hearing. Refueling points had not been set up, and the method of routing equipment under the proposed schedules had not been determined. However, the record shows that National, in active operation through its predecessors since October 15, 1934, engaged in air transportation over the presently proposed route from Daytona Beach to Jacksonville from November 19, 1934, to July 15, 1937. It is true that, during that period, operations did not cover route No. 39 or that part of route No. 31 extending from St. Petersburg to Miami. Nevertheless, the experience gained thereby should prove helpful in the inauguration of the Daytona Beach-Jacksonville operation. It is pertinent to note that both Jacksonville and Daytona Beach are presently supplied with service by National, that its maintenance bases are presently located at Jacksonville and St. Petersburg, that it is a going concern requiring only a few additional employees for the operation of the proposed service, and that the 93 miles involved therein represent less than 11 percent of its presently operated total route mileage.

As pointed out in Pan American Airways Co. (of Delaware) certificate of public convenience and necessity,⁸ the findings of the Authority as to an applicant's fitness, willingness, and ability in a "new route" proceeding are concerned primarily with the economic aspects thereof. Under section 604 (b) of the act, before an air carrier operating certificate can be issued to National authorizing the inauguration of the service from Daytona Beach to Jacksonville, the Authority must find, after investigation, that the applicant is properly and adequately equipped and able to conduct a safe operation in accordance with the requirements of the act, and the rules, regulations, and standards prescribed thereunder.

⁸ Docket No. 163.

As evidence of its financial position as of April 30, 1939, National submitted a balance sheet, here reproduced in condensed form:

NATIONAL AIRLINES, INC.

Balance sheet—Apr. 30, 1939

ASSETS

Current assets:		
Cash.....	\$7,952.64	
Other current assets.....	39,628.94	
		\$47,581.58
Deferred debits.....		8,013.32
Fixed assets:		
Real property and equipment.....	\$112,012.96	
Less: Accrued depreciation.....	35,182.73	
		76,830.23
Franchise.....	250,000.00	
Goodwill.....	1.00	
Excess of appraisal value over book value.....	11,405.02	
		338,236.25
Capital stock expense.....		1,982.52
Total assets.....		\$395,813.67

LIABILITIES

Current liabilities.....		38,119.32
Long-term debt:		
Mortgages payable.....	51,978.43	
Advances from affiliates.....	18,768.73	
		70,747.16
Prepaid revenue.....		291.76
Capital:		
Capital stock outstanding.....	166,062.00	
Premium on capital stock.....	9,093.00	
		175,155.00
Surplus:		
Earned surplus.....	10,890.70	
Capital surplus.....	122,974.65	
		112,083.95
Total liabilities and capital.....		\$395,813.67

The item "mortgages payable" in the amount of \$51,978.43, representing equipment mortgages payable over a 30-month period and carrying an interest charge of 6 percent, is paid to date. Since April 30, 1939, the date of the balance sheet, both the mortgages payable and the real property and equipment accounts have been increased by \$22,100, representing the purchase price of the fourth Lockheed acquired in May 1939.

The capital account represents 166,062 shares of \$1 par value capital stock outstanding plus a premium of \$9,093, which amount is the difference between the par value and offering price of a portion of the outstanding stock. During the period from April 30 to June 10, 1939, between 8,000 and 10,000 additional shares of stock were sold for cash at the premium price of \$2.50 per share. Since April 30, 1939,

therefore, the cash account of National has been increased by at least \$20,000 less the amount paid for brokerage commissions. As of April 30, 1939, current assets totaled \$47,581.58 as compared to current liabilities of \$38,119.32. It appears that, aside from such changes as would occur in the ordinary course of business, and those representing the above-mentioned sale of stock and the acquisition of the fourth Lockheed, no substantial change in the financial position of National occurred between April 30 and the date of the hearing. It appears, therefore, that as of the date of the hearing the ratio of current assets to current liabilities had been substantially improved over that existing on April 30, 1939. Eliminating the "franchise," "goodwill," and "excess of appraisal value over book value" accounts from consideration, National's net worth as of April 30, 1939, was \$25,832.93. Adding the \$20,000, less brokerage commissions, received by virtue of the stock sale, the net worth as of the date of the hearing appears to have increased materially over that of April 30, 1939.

It is pertinent to note that operation by National over the proposed Daytona Beach-Jacksonville route should enable it to effect certain economies in operating expenses, and the improved service between Tampa and Jacksonville which we have hereinbefore found would result by virtue of the proposed operation, should yield a higher revenue per mile than that previously realized on that part of route No. 31 extending between Tampa and Daytona Beach.

Considering its operating experience as an air carrier and the substantial period of time during which it or its predecessors have been actively engaged in air transportation, its present financial position, and the prospect for improvement therein by virtue of the proposed operation, we find, on the basis of the above findings of fact and the entire record in this proceeding, that National is fit, willing, and able properly to perform air transportation between Daytona Beach and Jacksonville, and to conform to the provisions of the act and the rules, regulations, and requirements of the Authority thereunder.

On the basis of the above findings of fact and the entire record in this case, we conclude and find:

(a) That the public convenience and necessity do not require air transportation by Eastern Air Lines, Inc., between Jacksonville and Miami via Tampa, or between Tallahassee and Orlando via Ocala, or over any portion of either of such proposed routes.

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(b) That the public convenience and necessity do not require air transportation by National Airlines, Inc., between Lakeland and Jacksonville via Ocala and Gainesville or over any portion of this proposed route; that the public convenience and necessity require air transportation by National Airlines, Inc., with respect to persons, property and mail between Daytona Beach and Jacksonville, and that National Airlines, Inc., is fit, willing, and able properly to perform such air transportation, and to conform to the provisions of the act and the rules, regulations, and requirements of the Authority issued thereunder.

An appropriate order, amending the certificate of public convenience and necessity held by National Airlines, Inc., for route No. 31 so as to designate Jacksonville, Fla., as a terminal point thereon, and Daytona Beach, Fla., as the next adjacent intermediate

point thereon, and otherwise denying the applications filed herein by National Airlines, Inc., and denying the applications filed herein by Eastern Air Lines, Inc., will be entered.

Hinckley, Branch, Ryan, Mason, Warner, Members of the Authority, concurred in the above opinion.

ORDER

National Airlines, Inc., having filed an application, an amendment thereto, and an amended application, for a certificate of public convenience and necessity authorizing it to engage in air transportation with respect to persons, property, and mail between (1) Lakeland, Fla., and Jacksonville, Fla., via Ocala, Fla., and Gainesville, Fla., or (2) Daytona Beach, Fla., and Jacksonville, Fla., or (3) over both such proposed routes; or for an amendment of its certificate of public convenience and necessity authorizing the air transportation of persons, property, and mail over route No. 31 so as to authorize similar air transportation between (1) Lakeland, Fla., and Jacksonville, Fla., via Ocala, Fla., and Gainesville, Fla., and (2) Daytona Beach, Fla., and Jacksonville, Fla., and having filed an application for an amendment of its said certificate for route No. 31 so as to authorize air transportation with respect to persons, property, and mail between Daytona Beach, Fla., and Jacksonville, Fla.; and Eastern Air Lines, Inc., having filed an application and an amendment thereto for a certificate of public convenience and necessity authorizing air transportation with respect to persons, property, and mail between Jacksonville, Fla., and Miami, Fla., via Tampa, Fla., and an application for a certificate of public convenience and necessity authorizing similar air transportation between Tallahassee, Fla., and Orlando, Fla., via Ocala, Fla.; the several applications having been consolidated into one proceeding and a full hearing thereon having been held; and the Authority, upon consideration of the record in said proceeding, having issued its opinion containing its findings of fact, conclusions and decision, which is attached hereto and made a part hereof, and finding that its action in this matter is necessary, pursuant to said opinion:

It Is ORDERED, That the certificate of public convenience and necessity authorizing National Airlines, Inc., subject to the provisions of said certificate, to engage in air transportation with respect to persons, property, and mail between the terminal point Daytona Beach, Fla., the intermediate points Orlando, Fla.,

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Lakeland, Fla., Tampa, Fla., St. Petersburg, Fla., Sarasota, Fla., and Fort Myers, Fla., and the terminal point Miami, Fla., be, and the same hereby is, amended so as to authorize National Airlines, Inc., subject to the provisions of said certificate, to engage in air transportation with respect to persons, property, and mail between the terminal point Jacksonville, Fla., the intermediate points Daytona Beach, Fla., Orlando, Fla., Lakeland, Fla., Tampa, Fla., St. Petersburg, Fla., Sarasota, Fla., and Fort Myers, Fla., and the terminal point Miami, Fla.

It Is FURTHER ORDERED, That the exercise of the privileges granted by said certificate shall be subject to the terms, conditions, and limitations prescribed by section 238.3 of The Economic Regulations of the Authority (formerly Regulation 401-F-1), all amendments thereto, and such other terms, conditions, and limitations as may from time to time be prescribed by the Authority.

It Is FURTHER ORDERED, That the said certificate, as amended, shall be issued in the form attached hereto and shall be signed on behalf of the Authority by the Chairman of the Authority and shall have affixed thereto the seal of the Authority, attested by the Secretary. Said certificate, as amended, shall be effective from the 21st day of March 1940.

It Is FURTHER ORDERED, That, except as to the air transportation with respect to persons, property, and mail to be authorized by said amendment of the certificate for route No. 31, the several applications herein of National Airlines, Inc., as amended, and of Eastern Air Lines, Inc., as amended, be and the same are denied.

DOCKET No. 234

DARLING—CANADIAN COLONIAL INTERLOCKING
RELATIONSHIPS

In the matter of the joint application of C. Coburn Darling and Canadian Colonial Airways, Inc., filed pursuant to section 409 (a) of the Civil Aeronautics Act, for permission for C. Coburn Darling to hold certain interlocking relationships.

Decided March 28, 1940

Application of C. Coburn Darling and Canadian Colonial Airways, Inc., for approval of the holding by C. Coburn Darling of the position of director of Canadian Colonial Airways, Inc., an air carrier, while holding the position of director of The Aviation Corporation, a company holding investments in other companies engaged in some phase of aeronautics, denied.

Application of C. Coburn Darling and Canadian Colonial Airways, Inc., for approval of the holding by C. Coburn Darling of the position of director of Canadian Colonial Airways, Inc., an air carrier, while holding the position of director of Roosevelt Field, Inc., a company operating an air port and a flying school, approved.

APPEARANCES:

Alexander C. Dick, for Canadian Colonial Airways, Inc.,
Hubert A. Schneider, and *John G. Sarber*, for the Civil Aeronautics Authority.

OPINION

BY THE AUTHORITY:

On May 8, 1939, C. Coburn Darling and Canadian Colonial Airways, Inc., filed a joint application pursuant to section 409 (a) of the Civil Aeronautics Act of 1938 and the regulations promulgated thereunder. The application seeks approval by the Authority of Mr. Darling's position as director of Canadian Colonial Airways, Inc., while he serves also as director of The Aviation Corporation and of Roosevelt Field, Inc.

After due notice to all interested parties and to the public, the application came on for public hearing before Lawrence J. Kusters, examiner, on November 8, 1939. Applicant Darling did not appear either in person or by attorney. After hearing and considering the evidence offered by Canadian Colonial Airways, Inc., and by counsel for the Authority, the examiner, on December 14, 1939, filed his report, in which he recommended that the application be denied. The report was duly served upon all interested parties; exceptions thereto were

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taken, both by Canadian Colonial Airways, Inc., and by counsel for the Authority; and Canadian Colonial Airways, Inc., filed a brief in support of its exceptions.

Applicant Darling is a citizen of the United States, maintaining a business address in Providence, R. I. Since December 6, 1932, he has served as a director of The Aviation Corporation and, on the date of the application in this proceeding, owned 100 shares of the capital

APRIL 15, 1940

stock of that company. His position as director of Roosevelt Field Inc., dates back to March 6, 1933, although it appears that he owned none of that company's stock at the time of his application. The record also discloses that he was elected to the board of directors of Aviation and Transportation Corporation on August 7, 1937, and was a member of its board as late as July 20, 1939. It further appears that, for a number of years, Mr. Darling was associated, directly or indirectly, with other aviation interests, including American Airlines, Inc.

Sigmund Janas, president and director of Canadian Colonial Airways, Inc., testified that, in an effort to strengthen the management of the company, he invited Mr. Darling to join its board; that Mr. Darling's name was proposed to the annual stockholders' meeting held in April 1939, and that Mr. Darling was elected a director for the ensuing year. Pending the outcome of this proceeding, however, he has not served in that capacity.

It is stated in the application that Mr. Darling owned no stock in Canadian Colonial Airways, Inc., at the time of the application. However, Mr. Janas testified that, after he invited Mr. Darling to become a director, the latter purchased a substantial number of shares of Canadian Colonial Airways, Inc., stock, partly for himself and partly as trustee. A list of the 20 largest stockholders of record on September 30, 1939, appearing to include all holders of 1,006 shares or more, does not include Mr. Darling's name.

The air carrier applicant, Canadian Colonial Airways, Inc., is a corporation organized under the laws of Delaware and having its principal offices in New York. As of the date of the hearing, it was engaged in scheduled air transportation, with respect to persons, property, and mail, between New York, N. Y., and Montreal, Canada, with intermediate stops at Albany, N. Y., and Burlington, Vt. Canadian Colonial Airways, Inc., owns 49 percent of the capital stock of Canadian Colonial Airways, Ltd., a Canadian corporation, which, according to Mr. Janas, engages in air transportation nonstop between Montreal, Canada, and New York, N. Y.

The issues involved can be brought into proper relief only by reciting, in some detail, the facts which the record discloses concerning the companies with which the air carrier applicant seeks an interlocking relationship. Likewise, the relationships, if any, of those companies to still other corporations, whether directly through investment hold-

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ings or indirectly through mutual connections of certain individuals, are a part of the background against which the interlocking relationships in issue must be considered.

The Aviation Corporation was organized under the laws of Delaware, and maintains offices in New York. Its principal business is the holding of stock in various units of the aviation industry. It wholly owns Aviation Manufacturing Corporation, which is described in the record as a manufacturing company. According to the application, The Aviation Corporation also held stock of American Airplane and Engine Corporation, Bendix Aviation Corporation, Canadian Airways, Ltd., Pan American Airways Corporation, and Roosevelt Field, Inc., on the date of the application. On January 27, 1939, The Aviation Corporation was the largest single stockholder in Roosevelt Field, Inc., holding 60,000 shares of that company's capital stock, 298,700

shares of which were outstanding at the time of the filing of the application in this proceeding.

The record discloses that a relationship between The Aviation Corporation and American Airlines, Inc., has existed for several years. On December 31, 1934, The Aviation Corporation owned all of the outstanding 277,775 shares of the capital stock of American Airlines, Inc. As a result of the Air Mail Act of 1934, this stock was distributed to the stockholders of The Aviation Corporation as of July 1, 1935, under a plan by which each holder of a \$5 par share of The Aviation Corporation's stock received in exchange a new \$3 par share of that company's stock, and in addition, one-tenth share of the stock of American Airlines, Inc., and one-twentieth share of the stock of Canadian Colonial Airways, Inc.¹ Thereafter, on July 1, 1936, American Airlines, Inc., in order to fund its existing indebtedness to The Aviation Corporation and to obtain new working capital, issued to The Aviation Corporation its 5-year 4½-percent nonconvertible debentures in the principal amount of \$872,187.50, and its 5-year 4½-percent convertible debentures in the principal amount of \$2,777,812.50, the latter being convertible into stock of American Airlines, Inc., at the rate of \$12.50 per share. On July 20, 1939, The Aviation Corporation still held the entire issue of nonconvertible debentures, and \$2,422,112.50 principal amount of the convertible debentures. While the record fails to disclose the total number of shares of stock of American Airlines, Inc., outstanding on July 20, 1939, it does show that 293,746 were outstanding on June 30 of that year.

It appears also from the record that The Aviation Corporation is itself subject to the working control of Aviation and Transportation Corporation, which, on July 20, 1939, owned 29.7 percent of The Aviation Corporation's outstanding stock.

¹ The record shows the source and amount of the Canadian Colonial Airways, Inc., stock only by inference.

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Aviation & Transportation Corporation is a corporation organized under the laws of Delaware, and described in the record as an investment company, having holdings in New York Shipbuilding Co., Columbia Axle Co., Auburn Automobile Co., and Lycoming Manufacturing Co. In addition, as indicated above, it exercises working control over The Aviation Corporation by virtue of its stockholdings in that company. As a stockholder of The Aviation Corporation, Aviation & Transportation Corporation participated in the distribution of the stock of American Airlines, Inc., previously mentioned, and, in turn, distributed that stock to its own stockholders as a dividend.

Certificates of public convenience and necessity heretofore issued by us,² in part, authorize American Airlines, Inc., to engage in air transportation, with respect to persons, property, and mail, between Chicago, Ill., and the coterminals New York, N. Y., and Newark, N. J., via certain intermediate points; between Boston, Mass., and the coterminals New York, N. Y., and Newark, N. J., via certain intermediate points; between Boston, Mass., and Cleveland, Ohio, via certain intermediate points, including Albany, N. Y.; between Albany, N. Y., and Fort Worth, Tex., via certain intermediate points, including New York, N. Y., and Newark, N. J.; and between Dallas,

Tex., and Los Angeles, Calif., via certain intermediate points, including Fort Worth, Tex.

Roosevelt Field, Inc., is a corporation organized under the laws of New York, with its general offices in that State. According to the application, its principal business is the operation of an airport and landing field at Mineola, Long Island, and the operation of a flying school.

The record identifies certain individuals with two or more of the above-mentioned corporations in such a way as to necessitate a brief recital of the facts which it discloses concerning their relationships. Only by so doing can the issues presented to us be intelligently defined and considered.

Since about June 1938, Mr. Janas has been president and director of Canadian Colonial Airways, Inc. For approximately 7 years prior to that time, he was associated with American Airlines, Inc., as assistant to the president. On March 23, 1939, Mr. Janas owned 27,939 of the outstanding 199,999½ shares of Canadian Colonial Airways, Inc., stock, although his holdings appear to have been reduced to 15,200 shares by November 8, 1939. Mr. Janas also serves as vice president of Canadian Colonial Airways, Ltd., and owns several thousand shares of the stock of American Airlines, Inc. He testified, however, that he owns no stock in either The Aviation Corporation or Aviation & Transportation Corporation.

¹ American Airlines, Inc., certificates of public convenience and necessity, docket No. 22-401 (E)-1; as amended by order dated Nov. 7, 1939, docket Nos. 278, 282, 284, 302.

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On March 31, 1939, E. L. Cord, who, prior to August 7, 1937, had been prominently identified with Aviation & Transportation Corporation, was the largest individual stockholder of American Airlines, Inc.; and, on March 23, 1939, he was also the record owner of 11,767 shares of the stock of Canadian Colonial Airways, Inc., and that holding was increased to 11,807 shares by September 30, 1939. The application lists Mr. Cord as the third largest stockholder in Canadian Colonial Airways, Inc., as of March 23, 1939. In addition to his holdings of Canadian Colonial Airways, Inc., stock, Mr. Cord is the assignee of notes of that company for \$227,000, face amount, secured by chattel mortgages on a substantial proportion of its aircraft. Mr. Janas testified that Mr. Cord occupies a position as adviser of Canadian Colonial Airways, Inc., for which he receives no remuneration, but that Mr. Cord has "refused to take any position in the corporate affairs or offer any advice."

On August 7, 1937, a syndicate organized by Emanuel & Co. purchased 500,000 shares of the stock of Aviation & Transportation Corporation. Victor Emanuel, who is at present a limited partner in Emanuel & Co., was at that time elected to the board of directors of Aviation & Transportation Corporation. It appears that, on July 20, 1939, Mr. Emanuel was president and chairman of the board of that corporation, and president and director of The Aviation Corporation. Emanuel & Co. was, on March 31, 1939, 1 of the 10 largest stockholders of record of American Airlines, Inc., although it does not appear for whose benefit the stock was held.

Among those who have been closely associated with Aviation & Transportation Corporation from the time of its organization were

L. B. Manning and R. S. Pruitt. Both have always been among the company's largest stockholders. On August 7, 1937, Mr. Manning purchased 118,000 shares of its stock, and Mr. Pruitt purchased 40,000 shares.

Mr. Manning served continuously on the board of Aviation & Transportation Corporation from 1929 until at least July 20, 1939, with the exception of portions of the years 1936 and 1937, when he devoted himself primarily to the affairs of The Aviation Corporation, and its subsidiary, Aviation Manufacturing Corporation. He was also a director of The Aviation Corporation on July 20, 1939. It further appears that, on September 30, 1939, he was the record holder, individually and as trustee, of 9,574 shares of Canadian Colonial Airways, Inc., stock.

Mr. Pruitt served as director of Aviation & Transportation Corporation from its formation in 1929 continuously until at least July 20, 1939. On that date, he was also vice president and secretary of the company, secretary of The Aviation Corporation, and a member of the law firm of Pruitt and Grealis, who were attorneys for both

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Aviation & Transportation Corporation and The Aviation Corporation and, at least at one time, for Canadian Colonial Airways, Inc., and American Airlines, Inc. On September 30, 1939, Mr. Pruitt owned 2,589 shares of the stock of Canadian Colonial Airways, Inc., and his wife owned 3,466 shares, making each of them 1 of the 20 largest stockholders of the company.

Section 409 (a) of the act provides as follows:

After one hundred and eighty days after the effective date of this section, it shall be unlawful, unless such relationship shall have been approved by order of the Authority upon due showing, in the form and manner prescribed by the Authority, that the public interest will not be adversely affected thereby—

(1) For any air carrier to have and retain an officer or director who is an officer, director, or member, or who as a stockholder holds a controlling interest, in any other person who is a common carrier or is engaged in any phase of aeronautics.

(2) For any air carrier, knowingly and wilfully, to have and retain an officer or director who has a representative or nominee who represents such officer or director as an officer, director, or member, or as a stockholder holding a controlling interest, in any other person who is a common carrier or is engaged in any phase of aeronautics.

(3) For any person who is an officer or director of an air carrier to hold the position of officer, director, or member, or to be a stockholder holding a controlling interest, or to have a representative or nominee who represents such person as an officer, director, or member, or as a stockholder holding a controlling interest, in any other person who is a common carrier or is engaged in any phase of aeronautics.

(4) For any air carrier to have and retain an officer or director who is an officer, director, or member, or who as a stockholder holds a controlling interest, in any person whose principal business, in purpose or in fact, is the holding of stock in, or control of, any other person engaged in any phase of aeronautics.

(5) For any air carrier, knowingly and wilfully, to have and retain an officer or director who has a representative or nominee who represents such officer or director as an officer, director, or member, or as a stockholder holding a controlling interest, in any person whose principal business, in purpose or in fact, is the holding of stock in, or control of, any other person engaged in any phase of aeronautics.

(6) For any person who is an officer or director of an air carrier to hold the position of officer, director, or member, or to be a stockholder holding a controlling interest, or to have a representative or nominee who represents such person as an officer, director, or member, or as a stockholder holding a controlling interest, in any person whose principal business, in purpose or in fact, is the holding of stock in, or control of, any other person engaged in any phase of aeronautics.

The Authority, in interpreting the above section, has previously declared:³

The act furnishes no express standards to guide the Authority in passing upon applications under this section, other than the

³In the matter of Lawrence C. Ames, decided Dec. 11, 1939, docket; No. 246.

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broad test of "public interest" and the partial definition of that term found in section 2 of the act. Accordingly, the Authority should proceed with caution, within the relatively broad limits of its discretionary power, in granting what amount to exceptions from the statutory prohibition. An applicant bears the burden of establishing by an affirmative showing that the public interest will not be adversely affected by the existence of a particular interlocking relationship.

The air carrier applicant contends in its brief that the section, so construed, raises substantial doubts as to its constitutionality, and that, therefore, in order to avoid such doubts, we should adopt a different construction and "not place any burden of proof" upon an applicant to show affirmatively that the relationship in question will not affect the public interest adversely. Even if the Authority were able to share the applicant's doubts, which we do not, we would not be at liberty to place a construction upon the section in question which would be in derogation of its plain meaning. We therefore reaffirm the construction which we have previously adopted.

Upon that premise, the issue arises as to whether the applicants have sustained the burden cast upon them by the statute. If the facts disclosed in the record present situations involving actual or potential injury to the public interest, we must hold that the applicants' burden has not been sustained. Moreover, unless the showing made by the applicants rebuts every reasonable inference that such a situation exists, we must reach the same conclusion.

We consider it our duty under the statute to look at each particular case in light of the showing made by the applicants. We find that here, as in the *Cohu* case,⁴ the applicants have not sustained the burden, placed upon them by the statute, of showing that the public interest will not be adversely affected by the proposed interlocking relationship between Canadian Colonial Airways, Inc., and The Aviation Corporation. The record before us does not deal adequately with various intercorporate relationships which the record suggests, and which the applicants would have to clarify before we could determine that their statutory burden had been met. It will suffice to call attention to a few examples of the confusion in which the record leaves these relationships and of the types of deficiencies which we find in the applicants' case.

Part of applicants' burden of proof in interlocking relationship cases of this type, where numerous corporate affiliations are involved, is to make clear the nature and extent of the various affiliations, and to describe the nature of the businesses conducted by each of the affiliated corporations. The extent of The Aviation Corporation's

⁴ In the matter of Lamotte T. Cohu, decided February 21, 1940; docket Nos. 156 and 289.

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interest in the companies in which it has stockholdings has not, with the exception of Aviation Manufacturing Corporation and Roosevelt Field, Inc., been defined by the applicants. Nor, with the exception of an obviously incomplete description of the activities of Aviation Manufacturing Corporation and a general statement as to the business of Roosevelt Field, Inc., have they supplied any information as to the nature of the businesses of those companies.

The applicants have not apprised us as to what voice, if any, The Aviation Corporation has in the affairs of American Airlines, Inc., or whether the former's creditor position carries with it any control, actual or potential, over the policies of the latter. Nor have they informed us as to the extent to which the stockholders of the two companies are identical.

The applicants remained silent as to the extent to which The Aviation Corporation represents the interests of its parent, Aviation & Transportation Corporation, which are not also the immediate interests of The Aviation Corporation, and as to the nature of the businesses conducted by the companies, other than The Aviation Corporation, in which Aviation & Transportation Corporation has holdings.

Again the applicants have failed to clarify sufficiently the relationship, if any, which exists between American Airlines, Inc., and Canadian Colonial Airways, Inc., directly or through the activities of individuals who may have interests in both of them.

No useful purpose would be served by a further exposition of the doubts which the record itself raises but does not resolve. Regardless of whether the Authority is permitted to search for information outside the record, it clearly is not required to do so. Unless, then, we can say that none of these doubts could be resolved in such a way as to be relevant to the issue before us, viz, whether the public interest will be adversely affected by Mr. Darling's position as director of both Canadian Colonial Airways, Inc., and The Aviation Corporation, we must hold that the applicants have failed to sustain their statutory burden of so demonstrating. The pertinency of the doubtful facts seems obvious. We find, accordingly, that the burden has not been sustained.

As to Mr. Darling's position as director of Canadian Colonial Airways, Inc., and Roosevelt Field, Inc., we are unable to distinguish the situation from that presented in the *Harding* case ⁵ where we approved an interlocking relationship between Eastern Air Lines, Inc., and Roosevelt Field, Inc. Since we see no reason to doubt our conclusion in that case, the application herein is granted as to the relationship in question.

⁵ In the matter of William Barclay Harding, decided July 26, 1939; docket No. 217.

An appropriate order will be entered.

Branch, Ryan, Mason, Warner, Members of the Authority, concurred in the above opinion. Hinckley, Chairman, did not take part in the decision.

ORDER

C. Coburn Darling and Canadian Colonial Airways, Inc., having filed application with the Authority on May 8, 1939, pursuant to section 409 (a) of the act, for approval of the holding by the said C. Coburn Darling of the following positions:

Director—Canadian Colonial Airways, Inc.,

Director—The Aviation Corporation,

Director—Roosevelt Field, Inc.;

And a full hearing thereon having been held, and the Authority upon full consideration of the record of such proceedings having issued its opinion, containing its findings of fact, conclusions and decision, which is attached hereto and made a part hereof, and finding that its action in this matter is necessary pursuant to said opinion:

Now, THEREFORE, IT IS ORDERED: That the application is denied insofar as it applies to the holding by the said C. Coburn Darling of the following positions:

Director—Canadian Colonial Airways, Inc.,

Director—The Aviation Corporation.

IT IS FURTHER ORDERED: That—

1. Subject to the further provisions of this order, the application is approved insofar as it applies to the holding by the said C. Coburn Darling of the following positions:

Director—Canadian Colonial Airways, Inc.,

Director—Roosevelt Field, Inc.

2. The approval herein granted shall continue with respect to the holding of such positions only so long as the said C. Coburn Darling continues in uninterrupted tenure thereof.

3. In the event of the resignation, withdrawal, or failure of reelection or appointment of said C. Coburn Darling, with respect to either of such positions, or in the event of any material or substantial change therein, the said C. Coburn Darling shall, within 30 days after such change occurs, give notice thereof to the Authority, setting forth the details of such change.

4. This order shall be subject to revocation by the Authority at any time, if it deems that the public interest will be adversely affected by the holding by the said C. Coburn Darling of such positions.

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